AUTHOR INDEX TO VOLUME 10

In this index complete citations are given under the name of each author, eliminating "See" references. Papers are arranged in ascending page number order.

ABHYANKAR, K. D.
Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

ALIŠAUSKAS, S. J.
Substitution Group and the Stretched Isoscalar Factors for the Group R_5—S. J. Ališauskas and A. P. Jucys. 10, 2227 (1969)

AMIT, Daniel J.
On the Renormalization of the Susceptibility of a Fermi Liquid—Daniel J. Amit. 10, 1617 (1969)

ANDERSON, N.
Bounds Associated with Integral Equations of Kirkwood-Riseman Type—N. Anderson, A. M. Arthurs, and P. D. Robinson. 10, 1498 (1969)

ANTOINE, J.-P.
Dirac Formalism and Symmetry Problems in Quantum Mechanics. I. General Dirac Formalism—J.-P. Antoine. 10, 53 (1969)
Dirac Formalism and Symmetry Problems in Quantum Mechanics. II. Symmetry Problems—J.-P. Antoine. 10, 2276 (1969)

ARTHURS, A. M.
Bounds Associated with Integral Equations of Kirkwood-Riseman Type—N. Anderson, A. M. Arthurs, and P. D. Robinson. 10, 1498 (1969)

ARUNASALAM, V.
Transverse Dielectric Tensor for a Free-Electron Gas in a Uniform Magnetic Field—V. Arunasalam. 10, 1305 (1969)

ASANO, Naruyoshi
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

ASLAKSEN, Erik, W.
Continuous Representation Theory Using the Affine Group—Erik W. Aslaksen and John R. Klauder. 10, 2267 (1969)

BACRY, H.
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

BAILEY, Paul B.
Diffraction by a Slit or Strip—Paul B. Bailey and George E. Barr. 10, 1906 (1969)

BAKER, George A., Jr.
Best Error Bounds for Padé Approximants to Convergent Series of Stieltjes—George A. Baker, Jr. 10, 814 (1969)
Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)

BAKRI, Mahmoud M.
De Sitter Symmetric Field Theory. I. One-Particle Theory—Mahmoud M. Bakri. 10, 298 (1969)

BALI, Naren F.
Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)

BARAKAT, Richard
Mth Power of an $N\times N$ Matrix and Its Connection with the Generalized Lucas Polynomials—Richard Barakat and Elizabeth Baumann. 10, 1474 (1969)

BAROODY, E. M.
Frequency Spectrum and Momentum Autocorrelation Function for a Simple Lattice—E. M. Baroody. 10, 475 (1969)

BARR, George E.
Diffraction by a Slit or Strip—Paul B. Bailey and George E. Barr. 10, 1906 (1969)

BASSETTO, A.
Wiener-Hopf Method and Generalized Integral Transforms—A. Bassetto and F. Paccanoni. 10, 1809 (1969)

BASU, Debabrata
Accidental Degeneracy in the Bethe–Salpeter Equation—Debabrata Basu and S. N. Biswas. 10, 2104 (1969)

BAUMANN, Elizabeth
Mth Power of an $N\times N$ Matrix and Its Connection with the Generalized Lucas Polynomials—Richard Barakat and Elizabeth Baumann. 10, 1474 (1969)

BAUS, M.
Possible Instability of the Cut-Contributions to the Ring Equations—M. Baus. 10, 1494 (1969)

BAXTER, R. J.
F Model on a Triangular Lattice—R. J. Baxter. 10, 1211 (1969)

BEL, Luis
Schwarzschild Singularity—Luis Bel. 10 1501 (1969)

BELASCO, Elliot P.
Initial Conditions in General Relativity: Lapse and Shift Formulation—Elliot P. Belasco and Hans C. Ohanian. 10, 1503 (1969)

BELL, G. M.
One-Dimensional Bonded Fluids—G. M. Bell. 10, 1753 (1969)

BERZI, Vittorio
Reciprocity Principle and the Lorentz Transformations—Vittorio Berzi and Vittorio Gorini. 10, 1518 (1969)

BESIERIS, Ioannis M.
Analysis of Electromagnetic Radiation in the Presence of a Uniformly Moving, Uniaxially Anisotropic Medium—Ioannis M. Besieris. 10, 1156 (1969)

BIEDENHARN, L. C.
Combinatorial Structure of State Vectors in U_n. I. Hook Patterns for Maximal and Semimaximal States in U_n—Mikael Ciftan and L. C. Biedenharn. 10, 221 (1969)

BISWAS, S. N.
Accidental Degeneracy in the Bethe–Salpeter Equation—Debabrata Basu and S. N. Biswas. 10, 2104 (1969)

BLAHA, Stephen
Character Analysis of $U(N)$ and $SU(N)$—Stephen Blaha. 10, 2156 (1969)

BLOMBERG, Clas
Functional Integrals Representing Distribution Functions in Statistical Mechanics—Clas Blomberg. 10, 675 (1969)

BLOXHAM, M. J. W.
S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)
S-Matrix Singularity Structure in the Physical Region. II. Unitarity Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 545 (1969)
S-Matrix Singularity Structure in the Physical Region. III. General Discussion of Simple Landau Singularities—M. J. W. Bloxham, D. I. Olive and J. C. Polkinghorne. 10, 553 (1969)

BOERSMA, Johannes
Uniform Asymptotic Theory of Edge Diffraction—Robert M. Lewis and Johannes Boersma. 10, 2291 (1969)

BOILLAT, Guy
Ray Velocity and Exceptional Waves: A Covariant Formulation—Guy Boillat. 10, 452 (1969)

BOSE, S. K.
Zero-Mass Representation of Poincaré Group and Conformal Invariance—S. K. Bose and R. Parker. 10, 812 (1969)

BOYER, Timothy H.
Concerning the Zeros of Some Functions Related to Bessel Functions—Timothy H. Boyer. 10, 1729 (1969)

BRACKEN, A. J.
On Canonical $SO(4, 1)$ Transformations of the Dirac Equation—A. J. Bracken and H. A. Cohen. 10, 2024 (1969)

BRANDT, Richard A.
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)

BRITTIN, W. E.
Functional Methods in Statistical Mechanics. I. Classical Theory—W. E. Brittin and W. R. Chappell. 10, 661 (1969)

BROCAS, J.
Comments on Kinetic Equations for Autocorrelation Functions—P. Résibois, J. Brocas, and G. Decan. 10, 964 (1969)

BROIDO, Michael M.
Bethe-Salpeter Equation—Michael M. Broido and John G. Taylor. 10, 184 (1969)

CALOGERO, F.
Lower Bounds to the Ground-State Energy of Systems Containing Identical Particles—F. Calogero and C. Marchioro. 10, 562 (1969)
Solution of a Three-Body Problem in One Dimension—F. Calogero. 10, 2191 (1969)
Ground State of a One-Dimensional N-Body System—F. Calogero. 10, 2197 (1969)

CANOSA, José
Diffusion in Nonlinear Multiplicative Media—José Canosa. 10, 1862 (1969)

CAPRI, Anton Z.
Electron in a Given Time-Dependent Electromagnetic Field—Anton Z. Capri. 10, 575 (1969)

CARMELI, Moshe
Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Group Analysis of Maxwell's Equations—Moshe Carmeli. 10, 1699 (1969)

CARTER, Benjamin P.
Partial Separation of the Schrödinger Equation for Two Charged Particles in a Magnetic Field—Benjamin P. Carter. 10, 788 (1969)

CARTER, Brandon
Killing Horizons and Orthogonally Transitive Groups in Space-Time—Brandon Carter. 10, 70 (1969)

CARTER, J. C.
$SU(6)$ Clebsch-Gordan Coefficients for the Product 35 $\otimes$ 70—J. C. Carter and J. J. Coyne. 10, 1204 (1969)

CASEY, K. F.
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)

CAWLEY, Robert G.
Hamilton-Dirac Theory of Hamilton's Equations—Robert G. Cawley. 10, 928 (1969)

CHANDLER, Colston
Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)

CHANG, Shau-Jin
Unitary Representation of $SL(2,C)$ in an $E(2)$ Basis—Shau-Jin Chang and L. O'Raifeartaigh. 10, 21 (1969)

CHAPPELL, W. R.
Functional Methods in Statistical Mechanics. I. Classical Theory—W. E. Brittin and W. R. Chappell. 10, 661 (1969)

CHARAP, John M.
Two-Variable Expansion of the Scattering Amplitude: An Application of Appell's Generalized Hypergeometric Functions—John M. Charap and B. M. Minton. 10, 1823 (1969)

CHEN, Robert L. W.
Isoperimetric Solutions Related to the Thermodynamics of Plasmas—Robert L. W. Chen and Thomas H. Neighbors III. 10, 439 (1969)

CHENG, D. K.
On the Uncoupling of Wiener–Hopf Equations for Half-Plane Diffraction Problems in a Gyrotropic Medium—H. S. Tan and D. K. Cheng. 10, 1957 (1969)

CHIANG, David
Further Note on Two Binomial Coefficient Identities of Rosenbaum—David Chiang. 10, 2098 (1969)

CHIN PANG, Sing
On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)

CHOI, Jong H.
Treatment of Degeneracies in the Schrödinger Perturbation Theory by Partitioning Technique—Jong H. Choi. 10, 2142 (1969)

CHOW, Yutze
Gel'fand–Kirillov Conjecture on the Lie Field of an Algebraic Lie Algebra—Yutze Chow. 10, 975 (1969)

CIFTAN, Mikael
Combinatorial Structure of State Vectors in U_n. I. Hook Patterns for Maximal and Semimaximal States in U_n—Mikael Ciftan and L. C. Biedenharn. 10, 221 (1969)
On the Combinatorial Structure of State Vectors in $U(n)$. II The Generalization of Hypergeometric Functions on $U(n)$ States—Mikael Ciftan. 10, 1635 (1969)

CISNEROS, Arturo
Symmetry of the Two-Dimensional Hydrogen Atom—Arturo Cisneros and Harold V. McIntosh. 10, 277 (1969)

COFFEY, Timothy P., Jr.
Invariants to All Orders in Classical Perturbation Theory—Timothy P. Coffey, Jr. 10, 426 (1969)
Nonlinear Perturbations—Timothy P. Coffey and G. W. Ford. 10, 998 (1969)
Motion of a Charged Particle in a Spatially Periodic Magnetic Field—Timothy P. Coffey. 10, 1362 (1969)

COHEN, E. G. D.
Normal and Abnormal Diffusion in Ehrenfests' Wind-Tree Model—E. H. Hauge and E. G. D. Cohen. 10, 397 (1969)

COHEN, H. A.
On Canonical $SO(4, 1)$ Transformations of the Dirac Equation—A. J. Bracken and H. A. Cohen. 10, 2024 (1969)

COHN, Jack
Considerations on the Classical Spinning Electron—Jack Cohn. 10, 799 (1969)

COMMON, A. K.
Properties of Generalizations to Padé Approximants—A. K. Common. 10, 1875 (1969)

COOK, F. L.
Linear Physical Chains with Sturm–Liouville Characteristic Polynomials—F. L. Cook and J. W. Jayne. 10, 1670 (1969)

COON, Darryl D.
Singularities of Conformal-Invariant Scattering Amplitudes—Darryl D. Coon. 10, 1314 (1969)

Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)

CORRSIN, S.
Experimental Confirmation of the Applicability of the Fokker-Planck Equation to a Nonlinear Oscillator—J. B. Morton and S. Corrsin. 10, 361 (1969)

COSTER, Joseph
Physical-Region Discontinuity Equations for Many-Particle Scattering Amplitudes. I—Joseph Coster and Henry P. Stapp. 10, 371 (1969)

COYNE, J. J.
$SU(6)$ Clebsch-Gordan Coefficients for the Product $35 \otimes 70$—J. C. Carter and J. J. Coyne. 10, 1204 (1969)

CROSIGNANI, B.
Quantum Harmonic Oscillator with Time-Dependent Frequency—S. Solimeno, P. Di Porto, and B. Crosignani. 10, 1922 (1969)

CUNNINGHAM, M. J.
Quasiparticle Formalism and Atomic Shell Theory—M. J. Cunningham and B. G. Wybourne. 10, 2149 (1969)

CUSHING, James T.
Exact Static-Model Bootstrap Solutions for Arbitrary 2×2 Crossing Matrices—James T. Cushing. 10, 1319 (1969)

DALTON, N. W.
Critical Point Behavior of the Ising Model with Higher-Neighbor Interactions Present—N. W. Dalton and D. W. Wood. 10, 1271 (1969)

DAVIDSON, Ernest R.
Linear Inequalities for Density Matrices—Ernest R. Davidson. 10, 725 (1969)

DAVIES, John A.
Lattice Dynamics of Simple Cubic Lattices with Long-Range Interactions—John A. Davies and Peter D. Yedinak. 10, 1090 (1969)

DAVIS, William R.
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)

de AZCÁRRAGA, J. A.
Observables for Massive Relativistic Particles of Arbitrary Spin—J. A. de Azcárraga and L. Oliver. 10, 1869 (1969)

DEBNEY, G. C.
Solutions of the Einstein and Einstein-Maxwell Equations—G. C. Debney, R. P. Kerr, and A. Schild. 10, 1842 (1969)

DECAN, G.
Comments on Kinetic Equations for Autocorrelation Functions—P. Résibois, J. Brocas, and G. Decan. 10, 964 (1969)

DELANEY, R. M.
Inner and Restriction Multiplicity for Classical Groups—R. M. Delaney and B. Gruber. 10, 252 (1969)

de la PEÑA-AUERBACH, L.
New Formulation of Stochastic Theory and Quantum Mechanics—L. de la Peña-Auerbach. 10, 1620 (1969)

DELBOURGO, R.
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \otimes SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)

DELIYANNIS, Platon C.
Spectral Theory of the Difference Equation $f(n+1) + f(n-1) = [E - \varphi(n)]f(n)$—Platon C. Deliyannis and Evangelos K. Ifantis. 10, 421 (1969)
Theory of Observables—Platon C. Deliyannis. 10, 2114 (1969)

Di PORTO, P.
Quantum Harmonic Oscillator with Time-Dependent Frequency—S. Solimeno, P. Di Porto, and B. Crosignani. 10, 1922 (1969)

DOBSON, J. F.
Many-Neighbored Ising Chain—J. F. Dobson. 10, 40 (1969)

DUDERSTADT, James J.
Theory of the Propagation of the Plane-Wave Disturbances in a Distribution of Thermal Neutrons—James J. Duderstadt. 10, 266 (1969)

DUNNE, S. A.
Application of the Kirillov Theory to the Representations of $O(2, 1)$—S. A. Dunne. 10, 860 (1969)

ECKSTUT, Gene
Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)

EFFRON, H. M.
Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)

EHRHARDT, P. O. G.
Crossing and Unitarity in a Multichannel Static Model. II.—P. O. G. Ehrhardt and D. B. Fairlie. 10, 339 (1969)

EXTON, Albert R.
Conserved Quantities in the Einstein-Maxwell Theory—Albert R. Exton, Ezra T. Newman, and Roger Penrose. 10, 1566 (1969)

EYGES, Leonard
Ground-State Many-Boson Problem with Repulsive Potentials—Leonard Eyges. 10, 644 (1969)

FAIRLIE, D. B.
Crossing and Unitarity in a Multichannel Static Model. II.—P. O. G. Ehrhardt and D. B. Fairlie. 10, 339 (1969)

FAN, Chungpeng
Solution of the Dimer Problem by the S-Matrix Method—Chungpeng Fan. 10, 868 (1969)

FEDERBUSH, Paul
Partially Alternate Derivation of a Result of Nelson—Paul Federbush. 10, 50 (1969)

FELDERHOF, B. U.
Dynamics near Equilibrium of Systems Described in Thermal Hartree-Fock Approximation—B. U. Felderhof. 10 1021 (1969)

FEUERVERGER, A.
Negative Finding for the Three-Dimensional Dimer Problem—J. M. Hammersley, A. Feuerverger, A. Izenman, and K. Makani. 10, 443 (1969)

FINK, James P.
Partial Sums of Vaccum Polarization Graphs—James P. Fink. 10, 1440 (1969)

FINLEY, J. D. III
Short-Range Interactions and Analyticity in Momentum Transfer—J. D. Finley III. 10, 2047 (1969)
Possible Characterization of Short-Range Interactions—J. D. Finley III. 10, 2060 (1969)

FORD, G. W.
Nonlinear Perturbations—Timothy P. Coffey and G. W. Ford. 10, 998 (1969)

FRANK, William M.
Erratum: Strong-Coupling Limit in Potential Theory. II—William M. Frank. 10, 2128 (1969)

FYMAT, A. L.
Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

GABRIEL, John R.
New Methods for Reduction of Group Representations. III—John R. Gabriel. 10, 1789 (1969)

New Methods for Reduction of Group Representations. IV—J. R. Gabriel. 10, 1932 (1969)

GAMBA, A.
Lie-like Approach to the Theory of Representations of Finite Groups—A. Gamba. 10, 872 (1969)

GAMBLIN, Rodger L.
Comments on the Classical Theory of Magnetic Monopoles—Rodger L. Gamblin. 10, 46 (1969)

GARDNER, C. S.
Korteweg–de Vries Equation and Generalizations. III. Derivation of the Korteweg–de Vries Equation and Burgers Equation—C. H. Su and C. S. Gardner. 10, 536 (1969)

GARRIDO, L. M.
General Interaction Picture from Action Principle for Mechanics—L. M. Garrido. 10, 1045 (1969)

GARROD, Claude
Reduced Density Matrices of Energy Eigenstates—Mitja Rosina, Jerome K. Percus, Louis J. Kijewski, and Claude Garrod. 10, 1761 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)

GAY, Warren L.
Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)

GELMAN, Donald
Feynman Path Integrals and Scattering Theory—Donald Gelman and Larry Spruch. 10, 2240 (1969)

GERVAIS, J. L.
Partial-Wave Expansion in the Crossed Channel for Scattering Amplitudes Invariant under the Galilei Group—J. L. Gervais and G. Velo. 10, 1265 (1969)

GHOSH, Dipan K.
On Next-Nearest-Neighbor Interaction in Linear Chain. I—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1388 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. II—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1399 (1969)

GIBBERD, R. W.
Next-Nearest-Neighbor Ising Model—R. W. Gibberd. 10, 1026 (1969)

GIBBS, Alan G.
Analytical Solutions of the Neutron Transport Equation in Arbitrary Convex Geometry—Alan G. Gibbs. 10, 875 (1969)

GIRARDEAU, M. D.
Broken Symmetry and Generalized Bose Condensation in Restricted Geometries—M. D. Girardeau. 10, 993 (1969)
Proof of the Symmetrization Postulate—M. D. Girardeau. 10, 1302 (1969)
Soluble Model of Condensation—M. D. Girardeau. 10, 1914 (1969)

GLASSER, M. L.
Evaluation of "Kondo" Integrals—M. L. Glasser. 10, 1105 (1969)

GLIMM, James
Infinite Renormalization of the Hamiltonian Is Necessary—James Glimm and Arthur Jaffe. 10, 2213 (1969)

GOLDBERG, Joshua N.
Generalization of Green's Theorem—Joshua N. Goldberg and Ezra T. Newman. 10, 369 (1969)

GOMATAM, Jagannathan
Powers of the D Functions—Jagannathan Gomatam and F. Rohrlich. 10, 614 (1969)

GORINI, Vittorio
Reciprocity Principle and the Lorentz Transformations—Vittorio Berzi and Vittorio Gorini. 10, 1518 (1969)

GOULD, H. W.
Note on Two Binomial Coefficient Identities of Rosenbaum—H.W. Gould. 10, 49 (1969)

GREEN, H. S.
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

GREENBERG, O. W.
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)

GRIFFITHS, Robert B.
Rigorous Results for Ising Ferromagnets of Arbitrary Spin—Robert B. Griffiths. 10, 1559 (1969)

GRUBER, B.
Inner and Restriction Multiplicity for Classical Groups—R. M. Delaney and B. Gruber. 10, 252 (1969)

GUTKOWSKI, D.
Analytic Properties of a Class of Nonlocal Interactions. II.—D. Gutkowski and A. Scalia. 10, 2306 (1969)

GUTZWILLER, Martin C.
Phase-Integral Approximation in Momentum Space and the Bound States of an Atom. II—Martin C. Gutzwiller. 10, 1004 (1969).

HAHNE, G. E.
Analytic Continuation of Appell's Hypergeometric Series F_2 to the Vicinity of the Singular Point $x = 1$, $y = 1$—G. E. Hahne. 10, 524 (1969)

HAJJ, Jack P.
Wave Equations, Multipole Solutions, and Characteristic Hypersurfaces for Massless Particles—Jack P. Hajj and David L. Weaver. 10, 1185 (1969)

HAMMER, C. L.
V-Particle Decay in the Lee Model—C. L. Hammer and T. A. Weber. 10, 2067 (1969)

HAMMERSLEY, J. M.
Negative Finding for the Three-Dimensional Dimer Problem—J. M. Hammersley, A. Feuerverger, A. Izenman, and K. Makani. 10, 443 (1969)

HARPER, Edward Y.
Diffraction of Plane Acoustic Waves and Pulses as a Singular Perturbation Problem—Edward Y. Harper. 10, 1795 (1969)

HARRIS, Frank E.
Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)

HARRISON, Don E., Jr.
Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)

HARTER, William G.
Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)

HAUGE, E. H.
Normal and Abnormal Diffusion in Ehrenfests' Wind-Tree Model—E. H. Hauge and E. G. D. Cohen. 10, 397 (1969)

HAYES, C. F.
Quantization of the Generalized Hamiltonian—C. F. Hayes. 10, 1555 (1969)

HECHT, K. T.
On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)

HEGERFELDT, Gerhard C.
Kernel Integral Formulas for the Canonical Commutation Relations of Quantum Fields. I. Representations with Cyclic Field—Gerhard C. Hegerfeldt. 10, 1681 (1969)

HERBERT, D. C.
Kinematic Interaction for the Heisenberg Antiferromagnet at Low Temperature—D. C. Herbert. 10, 2255 (1969)

HØEGH-KROHN, Raphael
Asymptotic Fields in Some Models of Quantum Field Theory. II—Raphael Høegh-Krohn. 10, 639 (1969)
HOFFMAN, Richard B.
Stationary "Noncanonical" Solutions of the Einstein Vacuum Field Equations—Richard B. Hoffman. 10, 953 (1969)
HOLLAND, Douglas Francis
Finite Transformations of $SU3$—Douglas Francis Holland. 10, 531 (1969)
Finite Transformations and Basis States of SU(n)—Douglas Francis Holland. 10, 1903 (1969)
HOLMAN, Wayne J. III
Representation Theory of $SP(4)$ and $SO(5)$—Wayne J. Holman III. 10, 1710 (1969)
Representation Theory of SO(4,1) and E(3,1): An Explicit Spinor Calculus—Wayne J. Holman III. 10, 1888 (1969)
HOWGATE, David W.
Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)
HUMI, Mayer
Remarks on Lie-Algebra-Invariant Equations. I—Mayer Humi. 10, 1897 (1969)
Remarks on Lie-Algebra-Invariant Equations. II—Mayer Humi. 10, 1900 (1969)
HURST, C. A.
Generalized Triangular Ising Lattice—R. G. J. Mills and C. A. Hurst. 10, 1531 (1969)
IAGOLNITZER, Daniel
S-Matrix and Classical Description of Interactions—Daniel Iagolnitzer. 10, 1241 (1969)
IFANTIS, Evangelos K.
Spectral Theory of the Difference Equation $f(n+1)+f(n-1)=[E-\varphi(n)]f(n)$—Platon C. Deliyannis and Evangelos K. Ifantis. 10, 421 (1969)
INOMATA, A.
Summation over Feynman Histories in Polar Coordinates—D. Peak and A. Inomata. 10, 1422 (1969)
ISHIDZU, Takehiko
SU_3 Algebra in the Mixed-Shell Space ($0p$, $0d$, $1s$). I—Takehiko Ishidzu, Hideo Kawarada, and Masachiyo Sato. 10, 683 (1969)
ITZYKSON, C.
Group Representation in a Continuous Basis: An Example—C. Itzykson. 10, 1109 (1969)
IZENMAN, A.
Negative Finding for the Three-Dimensional Dimer Problem—J. M. Hammersley, A. Feuerverger, A. Izenman, and K. Makani. 10, 443 (1969)
JAFFE, Arthur
Infinite Renormalization of the Hamiltonian Is Necessary—James Glimm and Arthur Jaffe. 10, 2213 (1969)
JALICKEE, John B.
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)
JAYNE, J. W.
Linear Physical Chains with Sturm-Liouville Characteristic Polynomials—F. L. Cook and J. W. Jayne. 10, 1670 (1969)
JERNOW, Stanley
Asymptotic Fields of the Lee Model—Stanley Jernow and Emil Kazes. 10, 1326 (1969)
JOHNSON, Porter W.
Orear Behavior in Potential Scattering. II—Porter W. Johnson. 10, 946 (1969)
JUCYS, A. P.
Substitution Group and the Stretched Isoscalar Factors for the Group R_5—S. J. Ališauskas and A. P. Jucys. 10, 2227 (1969)
KAC, Mark
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
KAHANE, Joseph
Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)
KAHN, Peter B.
Level Density of a Fermi System: Nonperiodic Perturbations of the Energy Level Scheme—Peter B. Kahn and N. Rosenzweig. 10, 707 (1969)
KAPER, Hans G.
Elementary Solutions of the Reduced Three-Dimensional Transport Equation—Hans G. Kaper. 10, 286 (1969)
KAPLAN, T. A.
Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)
KATZ, Amnon
Alternative Dynamics for Classical Relativistic Particles—Amnon Katz. 10, 1929 (1969)
Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)
Relativistic Effects of Strong Binding on Slow Particles—Amnon Katz. 10, 2215 (1969)
KATZIN, Gerald H.
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
KAWARADA, Hideo
SU_3 Algebra in the Mixed-Shell Space ($0p$, $0d$, $1s$). I—Takehiko Ishidzu, Hideo Kawarada, and Masachiyo Sato. 10, 683 (1969)
KAZES, Emil
Asymptotic Fields of the Lee Model—Stanley Jernow and Emil Kazes. 10, 1326 (1969)
KEAM, R. F.
Solution of the Bethe-Salpeter Equation with a Square-Well Potential—R. F. Keam. 10, 594 (1969)
KELLER, Joseph B.
Perturbation Theory of Nonlinear Boundary-Value Problems—Martin H. Millman and Joseph B. Keller. 10, 342 (1969)
KENNEDY, Frederick James
Instantaneous Action-at-a-Distance Formulation of Classical Electrodynamics—Frederick James Kennedy. 10, 1349 (1969)
KERMODE, Mark W.
Effective-Range Formula for Two-Body Scattering Coupled to a Closed Secondary Channel—Mark W. Kermode. 10, 1953 (1969)
KERR, R. P.
Solutions of the Einstein and Einstein-Maxwell Equations—G. C. Debney, R. P. Kerr, and A. Schild. 10, 1842 (1969)
KIANG, Hsiao, S.
N-Representability Theorem for Reduced Density Matrices—Hsiao S. Kiang. 10, 1920 (1969)
KIHLBERG, Arne
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

KIJEWSKI, Louis J.
Reduced Density Matrices of Energy Eigenstates—Mitja Rosina, Jerome K. Percus, Louis J. Kijewski, and Claude Garrod. 10, 1761 (1969)
KIM, Shoon Kyung
Involutional Matrices Based on the Representation Theory of $GL(2)$—Shoon Kyung Kim. 10, 1225 (1969)
KIM, Y. E.
Solution of the Faddeev Equation for Local Potentials by Approximate Product-Integration—Y. E. Kim. 10, 1491 (1969)
KINNERSLEY, William
Type D Vacuum Metrics—William Kinnersley. 10, 1195 (1969)
KLAUDER, John R.
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)
Continuous Representation Theory Using the Affine Group—Erik W. Aslaksen and John R. Klauder. 10, 2267 (1969)
KLEINER, W. H.
Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)
KLINK, William H.
Unitary Representations of the Poincaré Group Contained in a Class of Representations of the Conformal Group—William H. Klink. 10, 606 (1969)
Clebsch-Gordan Coefficients and Functions over Cosets—William H. Klink. 10, 1477 (1969)
KOBE, Donald H.
Single-Particle Condensate and Pair-Correlation Theory of Inhomogeneous Boson Systems—Donald H. Kobe. 10, 1507 (1969)
KOLLER, K.
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \circledS SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)
KORENMAN, Victor
On Perturbation Expansions for Real-Time Green's Functions—Victor Korenman. 10, 1387 (1969)
KRAUT, Edgar A.
Diffraction of Electromagnetic Waves by a Right-Angle Dielectric Wedge—Edgar A. Kraut and Guy W. Lehman. 10, 1340 (1969)
KRIEGER, J. B.
Exact Quantization Conditions. II—J. B. Krieger. 10, 1455 (1969)
KSCHWENDT, H.
Numerical Solution of Integral Equations Using Legendre Polynomials—H. Kschwendt. 10, 1964 (1969)
KUHN, Harold W.
Combinatorial Approach to the N-Representability of P-Density Matrices—Mark L. Yoseloff and Harold W. Kuhn. 10, 703 (1969)
KULHANEK, J.
Equations of the de Broglie Wavefield in the Case of Spherical Symmetry—J. Kulhanek. 10, 1152 (1969)
KUSZELL, A.
Kinetic Description of an Inhomogeneous Plasma—A. Kuszell. 10, 210 (1969)
KVARDA, Robert E.
Canonical States in Quantum Statistical Mechanics—Robert E. Kvarda. 10, 2208 (1969)
KYUNG KIM, Shoon
Involutional Matrices Based on the Representation Theory of $GL(2)$—Shoon Kyung Kim. 10, 1225 (1969)
LAM, C. S.
Internal Labeling Problem—R. T. Sharp and C. S. Lam. 10, 2033 (1969)
LANCZOS, C.
Quadratic Action Principle of Relativity—C. Lanczos. 10, 1057 (1969)
LEAF, Boris
Canonical Transformations and Spectra of Quantum Operators—Boris Leaf. 10, 1971 (1969)
Canonical Operators for the Simple Harmonic Oscillator—Boris Leaf. 10, 1980 (1969)
LEE, Huan
On the Isospin Crossing Matrix—Huan Lee. 10, 779 (1969)
LEE, M. Howard
Cluster Expansion in a Bose System—M. Howard Lee. 10, 1813 (1969)
LEHMAN, Guy W.
Diffraction of Electromagnetic Waves by a Right-Angle Dielectric Wedge—Edgar A. Kraut and Guy W. Lehman. 10, 1340 (1969)
LEPLAE, L.
Boson Formalism in Superconductivity—L. Leplae and H. Umezawa. 10, 2038 (1969)
LERCHE, I.
Instability of Transverse Waves in a Relativistic Plasma—I. Lerche. 10, 13 (1969)
LEVINE, Jack
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
LÉVY-LEBLOND, Jean-Marc
Nonsaturation of Gravitational Forces—Jean-Marc Lévy-Leblond. 10, 806 (1969)
LEWIS, H. R., Jr.
An Exact Quantum Theory of the Time-Dependent Harmonic Oscillator and of a Charged Particle in a Time-Dependent Electromagnetic Field—H. R. Lewis, Jr., and W. B. Riesenfeld. 10, 1458 (1969)
LEWIS, Robert M.
Uniform Asymptotic Theory of Edge Diffraction—Robert M. Lewis and Johannes Boersma. 10, 2291 (1969)
LIEB, Elliott H.
Phase Transition in Zero Dimensions: A Remark on the Spherical Model—Elliott H. Lieb and Colin J. Thompson. 10, 1403 (1969)
LUKIERSKI, Jerzy
Analytic Representations of Two-Point Functions with Noncanonical Light-Cone Singularities. I—Jerzy Lukierski. 10, 918 (1969)
MACK, G.
Irreducibility of the Ladder Representations of $U(2,2)$ when Restricted to the Poincaré Subgroup—G. Mack and I. Todorov. 10, 2078 (1969)
MADUEMEZIA, Awele
Partial-Wave Analysis in Terms of $SL(2, C)/SU(2)$ Harmonic Functions—Awele Maduemezia. 10, 519 (1969)
MAJUMDAR, Chanchal K.
Problem of Two Spin Deviations in a Linear Chain with Next-Nearest-Neighbor Interactions—Chanchal K. Majumdar. 10, 177 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. I—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1388 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. II—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1399 (1969)

MAKANI, K.
Negative Finding for the Three-Dimensional Dimer Problem—J. M. Hammersley, A. Feuerverger, A. Izenman, and K. Makani. 10, 443 (1969)

MARCHIORO, C.
Lower Bounds to the Ground-State Energy of Systems Containing Identical Particles—F. Calogero and C. Marchioro. 10, 562 (1969)

MATTHES, J. R.
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)

MATTIS, Daniel C.
Magnetization of Ising Model in Nonzero Magnetic Field—Daniel C. Mattis and Michael Plischke. 10, 1107 (1969)

McDONALD, J. F.
On the Width Distribution for a Complex System Whose Hamiltonian Contains a Small Interaction That Is Odd under Time-Reversal—J. F. McDonald. 10, 1191 (1969)

McDONALD, S. C.
Hyperplane Helicity States—S. C. McDonald. 10, 1234 (1969)

McINTOSH, Harold V.
Symmetry of the Two-Dimensional Hydrogen Atom—Arturo Cisneros and Harold V. McIntosh. 10, 277 (1969)

McNEIL, Richard P.
Physical Regions of Six-Particle Processes—Richard P. McNeil and Richard A. Morrow. 10, 2185 (1969)

McQUISTAN, R. B.
Vacancy Annihilation for One-Dimensional Dumbell Kinetics—R. B. McQuistan. 10, 2205 (1969)

MEETZ, Kurt
Realization of Chiral Symmetry in a Curved Isospin Space—Kurt Meetz. 10, 589 (1969)

MICKELSSON, Jouko
Representation Functions for $SU(3)$—Jouko Mickelsson. 10, 1968 (1969)

MILLARD, Kenneth
Translational Invariance Properties of a Finite One-Dimensional Hard-Core Fluid Using the Grand Canonical Ensemble—Kenneth Millard. 10, 7 (1969)

MILLER, Marvin M.
Dynamics in the Diagonal Coherent-State Representation—Marvin M. Miller. 10, 1406 (1969)

MILLER, Melvin, N.
Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)

Bounds for Effective Bulk Modulus of Heterogeneous Materials—Melvin N. Miller. 10, 2005 (1969)

MILLMAN, Martin H.
Perturbation Theory of Nonlinear Boundary-Value Problems—Martin H. Millman and Joseph B. Keller. 10, 342 (1969)

MILLS, R. G. J.
Generalized Triangular Ising Lattice—R. G. J. Mills and C. A. Hurst. 10, 1531 (1969)

MILLS, Robert L.
Inversion Problem with Separable Potentials—Robert L. Mills and John F. Reading. 10, 321 (1969)

MINTON, B. M.
Two-Variable Expansion of the Scattering Amplitude: An Application of Appell's Generalized Hypergeometric Functions—John M. Charap and B. M. Minton. 10, 1823 (1969)

MIRMAN, R.
Classification and Complete Reducibility of Representations of Compact Inhomogeneous Groups and Algebras—R. Mirman. 10, 331 (1969)

MOLYNEUX, John E.
Statistical Properties of Polycrystalline Dielectrics—John E. Molyneux. 10, 912 (1969)

MONTROLL, Elliott W.
Random Walks on Lattices. III. Calculation of First-Passage Times with Application to Exciton Trapping on Photosynthetic Units—Elliott W. Montroll. 10, 753 (1969)

MORAVCSIK, Michael J.
Determination of Invariant Amplitudes from Experimental Observables—Michael J. Moravcsik and Wing-Yin Yu. 10, 925 (1969)

MORRISON, J. C.
Group Theory and Mixed Atomic Configurations—J. C. Morrison. 10, 1431 (1969)

MORROW, Richard A.
Physical Regions of Six-Particle Processes—Richard P. McNeil and Richard A. Morrow. 10, 2185 (1969)

MORTON, J. B.
Experimental Confirmation of the Applicability of the Fokker-Planck Equation to a Nonlinear Oscillator—J. B. Morton and S. Corrsin. 10, 361 (1969)

MOSHINSKY, M.
General Approach to Fractional Parentage Coefficients—M. Moshinsky and V. Syamala Devi. 10, 455 (1969)

MOYAL, J. E.
Mean Ergodic Theorems in Quantum Mechanics—J. E. Moyal. 10, 506 (1969)

MUKUNDA, N.
Expansion of Lie Groups and Representations of $SL(3, C)$—N. Mukunda. 10, 897 (1969)

Matrices of Finite Lorentz Transformations in a Noncompact Basis. I. Discrete Series of $O(2,1)$—N. Mukunda. 10, 2086 (1969)

Matrices of Finite Lorentz Transformations in a Noncompact Basis. II. Continuous Series of $O(2,1)$—N. Mukunda. 10, 2092 (1969)

NAVON, A.
Criteria for Slater Determinants and Quasiparticle Vacuum States—A. Navon. 10, 821 (1969)

NEIGHBORS, Thomas H. III
Isoperimetric Solutions Related to the Thermodynamics of Plasmas—Robert L. W. Chen and Thomas H. Neighbors III. 10, 439 (1969)

NEURINGER, J. L.
Closed-Form Solution of the Differential Equation $\left(\frac{\partial^2}{\partial x \partial y} + ax\frac{\partial}{\partial x} + by\frac{\partial}{\partial y} + cxy + \frac{\partial}{\partial t}\right)P = 0$ Subject to the Initial Condition $P(x, y, t = 0) = \Phi(x, y)$—J. L. Neuringer. 10, 250 (1969)

NEWMAN, Ezra T.
Generalization of Green's Theorem—Joshua N. Goldberg and Ezra T. Newman. 10, 369 (1969)

Conserved Quantities in the Einstein-Maxwell Theory—Albert R. Exton, Ezra T. Newman, and Roger Penrose. 10, 1566 (1969)

NORTHOVER, F. H.
Sufficiency Condition for the Validity of the WKB Approximation—F. H. Northover. 10, 715 (1969)

NUSSENZVEIG, H. M.
High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)

High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)

OHANIAN, Hans C.
Initial Conditions in General Relativity: Lapse and Shift Formulation—Elliot P. Belasco and Hans C. Ohanian. 10, 1503 (1969)

OKOLOWSKI, J. A.
Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)

OLIVE, D. I.
S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)
S-Matrix Singularity Structure in the Physical Region. II. Unitarity Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 545 (1969)
S-Matrix Singularity Structure in the Physical Region. III. General Discussion of Simple Landau Singularities—M. J. W. Bloxham, D. I. Olive and J. C. Polkinghorne. 10, 553 (1969)

OLIVER, L.
Observables for Massive Relativistic Particles of Arbitrary Spin—J. A. de Azcárraga and L. Oliver. 10, 1869 (1969)

O'RAIFEARTAIGH, L.
Unitary Representation of $SL(2,C)$ in an $E(2)$ Basis—Shau-Jin Chang and L. O'Raifeartaigh. 10, 21 (1969)

OTTERSON, Paul
Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)

PACCANONI, F.
Wiener-Hopf Method and Generalized Integral Transforms—A. Bassetto and F. Paccanoni. 10, 1809 (1969)

PAHOR, S.
Invariant Imbedding and Case Eigenfunctions—S. Pahor and P. F. Zweifel. 10, 581 (1969)
Half-Space Multigroup Transport Theory—S. Pahor and J. K. Shultis. 10, 2220 (1969)

PAJAS, P.
Degenerate Representations of the Symplectic Groups. II. The Noncompact Group $Sp(p,q)$—P. Pajas. 10, 1777 (1969)

PANG, Sing Chin
On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)

PARKER, R.
Zero-Mass Representation of Poincaré Group and Conformal Invariance—S. K. Bose and R. Parker. 10, 812 (1969)

PEAK, D.
Summation over Feynman Histories in Polar Coordinates—D. Peak and A. Inomata. 10, 1422 (1969)

PELLICER, R.
Nonlinear Electrodynamics and General Relativity—R. Pellicer and R. J. Torrence. 10, 1718 (1969)

PENROSE, Roger
Solutions of the Zero-Rest-Mass Equations—Roger Penrose. 10, 38 (1969)
Conserved Quantities in the Einstein-Maxwell Theory—Albert R. Exton, Ezra T. Newman, and Roger Penrose. 10, 1566 (1969)

PERCUS, Jerome K.
Reduced Density Matrices of Energy Eigenstates—Mitja Rosina, Jerome K. Percus, Louis J. Kijewski, and Claude Garrod. 10, 1761 (1969)
One More Technique for the Dimer Problem—Jerome K. Percus. 10, 1881 (1969)

PERES, Asher
Renormalization of a Finite Matrix Hamiltonian—Asher Peres. 10, 629 (1969)

PETERS, P. C.
Geometrization of the Brans-Dicke Scalar Field—P. C. Peters. 10, 1029 (1969)
Covariant Electromagnetic Potentials and Fields in Friedmann Universes—P. C. Peters. 10, 1216 (1969)

PLISCHKE, Michael
Magnetization of Ising Model in Nonzero Magnetic Field—Daniel C. Mattis and Michael Plischke. 10, 1107 (1969)

POLKINGHORNE, J. C.
S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)
S-Matrix Singularity Structure in the Physical Region. II. Unitarity Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 545 (1969)
S-Matrix Singularity Structure in the Physical Region. III. General Discussion of Simple Landau Singularities—M. J. W. Bloxham, D. I. Olive and J. C. Polkinghorne. 10, 553 (1969)

PROSSER, Reese T.
Formal Solutions of Inverse Scattering Problems—Reese T. Prosser. 10, 1819 (1969)
Spectral Analysis of Classical Central Force Motion—Reese T. Prosser. 10, 2233 (1969)

PRUGOVEČKI, Eduard
Measure-Theoretical Description of Klein-Gordon Multiparticle States—Eduard Prugovečki. 10, 933 (1969)

RADHAKRISHNAN, D.
Internal Multiplicity Structure for the Chain $SU(n) \supset SU(n-1) \supset \cdots \supset SU(2)$—D. Radhakrishnan. 10, 2129 (1969)

RAMANATHAN, G. V.
Model for the Derivation of Kinetic Theory—G. V. Ramanathan and G. Sandri. 10, 1763 (1969)

READING, John F.
Inversion Problem with Separable Potentials—Robert L. Mills and John F. Reading. 10, 321 (1969)

RÉSIBOIS, P.
Comments on Kinetic Equations for Autocorrelation Functions—P. Résibois, J. Brocas, and G. Decan. 10, 964 (1969)

REVZEN, M.
Self-Consistent Approximations in Many-Body Systems—M. Revzen and L. E. H. Trainor. 10, 1804 (1969)
Self-Consistent Approximations in Many-Body Systems. II—O. Shlidor and M. Revzen. 10, 2201 (1969)

RIESENFELD, W. B.
An Exact Quantum Theory of the Time-Dependent Harmonic Oscillator and of a Charged Particle in a Time-Dependent Electromagnetic Field—H. R. Lewis, Jr., and W. B. Riesenfeld. 10, 1458 (1969)

ROBINSON, David C.
Conserved Quantities of Newman and Penrose—David C. Robinson. 10, 1745 (1969)

ROBINSON, Peter D.
Complementary Bounds for Ground-State Energies—Peter D. Robinson. 10, 472 (1969)
Bounds Associated with Integral Equations of Kirkwood-Riseman Type—N. Anderson, A. M. Arthurs, and P. D. Robinson. 10, 1498 (1969)

ROHRLICH, F.
Powers of the *D* Functions—Jagannathan Gomatam and F. Rohrlich. 10, 614 (1969)

ROSEN, Gerald
Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)

ROSENBAUM, David M.
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)

ROSENZWEIG, N.
Level Density of a Fermi System: Nonperiodic Perturbations of the Energy Level Scheme—Peter B. Kahn and N. Rosenzweig. 10, 707 (1969)

ROSINA, Mitja
Reduced Density Matrices of Energy Eigenstates—Mitja Rosina, Jerome K. Percus, Louis J. Kijewski, and Claude Garrod. 10, 1761 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)

ROSS, William R.
Some Analytic Properties of Scattering Amplitudes for Long-Range Forces—William R. Ross and John R. Taylor. 10, 654 (1969)

ROTH, C.
Algebraic Matrices for the Configurations $(d+s)^n p$—C. Roth. 10, 1038 (1969)

ROTH, J. Reece
Periodic Small-Amplitude Solutions to Volterra's Problem of Two Conflicting Populations and Their Application to the Plasma Continuity Equations—J. Reece Roth. 10, 1412 (1969)

ROUSSEAU, C. C.
Application of Perturbation Theory to Many-Body Systems with Localized Particles—C. C. Rousseau and D. P. Saylor. 10, 2179 (1969)

ROWE, D. J.
Properties of Overcomplete and Nonorthogonal Basis Vectors—D. J. Rowe. 10, 1774 (1969)

RÜHL, W.
Classical Fields on Spacelike Mass Shells—W. Rühl. 10, 791 (1969)

RYAN, Michael P., Jr.
General Form of the Einstein Equations for a Bianchi Type IX Universe—Michael P. Ryan, Jr. 10, 1724 (1969)

SAH, Priyamvada
Statistical Average of Product of Phase Sums Arising in the Study of Disordered Lattices—Priyamvada Sah. 10, 2263 (1969)

SANDRI, G.
Model for the Derivation of Kinetic Theory—G. V. Ramanathan and G. Sandri. 10, 1763 (1969)

SANTHANAM, T. S.
Generating Functions of Classical Groups and Evaluation of Partition Functions—T. S. Santhanam. 10, 1704 (1969)

SATO, Masachiyo
SU_3 Algebra in the Mixed-Shell Space $(0p, 0d, 1s)$. I—Takehiko Ishidzu, Hideo Kawarada, and Masachiyo Sato. 10, 683 (1969)

SAYLOR, D. P.
Application of Perturbation Theory to Many-Body Systems with Localized Particles—C. C. Rousseau and D. P. Saylor. 10, 2179 (1969)

SCALIA, A.
Analytic Properties of a Class of Nonlocal Interactions. II.—D. Gutkowski and A. Scalia. 10, 2306 (1969)

SCHILD, A.
Solutions of the Einstein and Einstein–Maxwell Equations—G. C. Debney, R. P. Kerr, and A. Schild. 10, 1842 (1969)

SCHRANK, Glen
Algebraic Classification of Four-Dimensional Riemann Spaces—James Thompson and Glen Schrank. 10, 766 (1969)

SHAMPINE, L. F.
Existence of Solutions for Certain Nonlinear Boundary-Value Problems—L. F. Shampine. 10, 1177 (1969)

SHARP, R. T.
Internal Labeling Problem—R. T. Sharp and C. S. Lam. 10, 2033 (1969)

SHIBUYA, Tai-ichi
Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)

SHLIDOR, O.
Self-Consistent Approximations in Many-Body Systems. II—O. Shlidor and M. Revzen. 10, 2201 (1969)

SHULTIS, J. K.
Half-Space Multigroup Transport Theory—S. Pahor and J. K. Shultis. 10, 2220 (1969)

SIEGERT, Arnold J. F.
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)

SIMON, Barry
On the Growth of the Number of Bound States with Increase in Potential Strength—Barry Simon. 10, 1123 (1969)
On the Growth of the Ground-State Binding Energy with Increase in Potential Strength—Barry Simon. 10, 1415 (1969)

SINANOĞLU, Oktay
Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)

SIROVICH, Lawrence
Wave Propagation and Other Spectral Problems in Kinetic Theory—Lawrence Sirovich and James K. Thurber. 10, 239 (1969)

SMITH, Vedene H., Jr.
Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)

SOLIMENO, S.
Quantum Harmonic Oscillator with Time-Dependent Frequency—S. Solimeno, P. Di Porto, and B. Crosignani. 10, 1922 (1969)

SOLLFREY, William
Inverse Functions of the Products of Two Bessel Functions—William Sollfrey. 10, 1429 (1969)

SPECTOR, Richard M.
High-Energy Scattering Cross Section for Singular Potentials at Large Angles—Richard M. Spector. 10, 503 (1969)

SPRUNCH, Larry
Feynman Path Integrals and Scattering Theory—Donald-Gelman and Larry Spruch. 10, 2240 (1969)

STABELL, R.
First-Order Approximation to a Spherically Symmetric Solution of Einstein's Equations—R. Stabell. 10, 735 (1969)

STAPP, Henry P.
Physical-Region Discontinuity Equations for Many-Particle Scattering Amplitudes. I—Joseph Coster and Henry P. Stapp. 10, 371 (1969)

STAPP, Henry P.
Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)

STRECKER, Joseph L.
One-Dimensional Phase Transition—Joseph L. Strecker. 10, 1541 (1969)

STREIT, L.
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)

SU, C. H.
Korteweg–de Vries Equation and Generalizations. III. Derivation of the Korteweg–de Vries Equation and Burgers Equation—C. H. Su and C. S. Gardner. 10, 536 (1969)
SUMMERFIELD, G. C.
Relationships among Generalized Phase-Space Distributions—G. C. Summerfield and P. F. Zweifel. 10, 233 (1969)
SYAMALA DEVI, V.
General Approach to Fractional Parentage Coefficients—M. Moshinsky and V. Syamala Devi. 10, 455 (1969)
TAN, H. S.
On the Uncoupling of Wiener–Hopf Equations for Half-Plane Diffraction Problems in a Gyrotropic Medium—H. S. Tan and D. K. Cheng. 10, 1957 (1969)
TANIUTI, Tosiya
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)
TAUBER, G. E.
Massive Vector Meson Interacting with the Gravitational Field. I. General Formalism—G. E. Tauber. 10, 633 (1969)
TAYLOR, John G.
Bethe-Salpeter Equation—Michael M. Broido and John G. Taylor. 10, 184 (1969)
TAYLOR, John R.
Some Analytic Properties of Scattering Amplitudes for Long-Range Forces—William R. Ross and John R. Taylor. 10, 654 (1969)
THOMPSON, Colin J.
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
Phase Transition in Zero Dimensions: A Remark on the Spherical Model—Elliott H. Lieb and Colin J. Thompson. 10, 1403 (1969)
THOMPSON, James
Algebraic Classification of Four-Dimensional Riemann Spaces—James Thompson and Glen Schrank. 10, 766 (1969)
THORPE, John A.
Curvature of the Petrov Canonical Forms—John A. Thorpe. 10, 1 (1969)
THURBER, James K.
Wave Propagation and Other Spectral Problems in Kinetic Theory—Lawrence Sirovich and James K. Thurber. 10, 239 (1969)
TING, Chung-Yu
Theoretical Study of Finite Dielectric-Coated Cylindrical Antenna—Chung-Yu Ting. 10, 480 (1969)
TODOROV, I. T.
Spectral Representation of the Covariant Two-Point Function and Infinite-Component Fields with Arbitrary Mass Spectrum—I. T. Todorov and R. P. Zaikov. 10, 2014 (1969)
Irreducibility of the Ladder Representations of $U(2,2)$ when Restricted to the Poincaré Subgroup—G. Mack and I. Todorov. 10, 2078 (1969)
TOKIZAWA, Masamichi
On Continuous Eigenvalues in Neutron Thermalization—Masamichi Tokizawa. 10, 1834 (1969)
TORRENCE, R. J.
Nonlinear Electrodynamics and General Relativity—R. Pellicer and R. J. Torrence. 10, 1718 (1969)
TRAINOR, L. E. H.
Self-Consistent Approximations in Many-Body Systems—M. Revzen and L. E. H. Trainor. 10, 1804 (1969)
TRIFFET, T.
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
ULLAH, Nazakat
On a Generalized Distribution of the Poles of the Unitary Collision Matrix—Nazakat Ullah. 10, 2099 (1969)
UMEZAWA, H.
Boson Formalism in Superconductivity—L. Leplae and H. Umezawa. 10, 2038 (1969)
UZES, C. A.
Plane-Symmetric Gauge Field—C. A. Uzes. 10, 1885 (1969)
VAJK, J. Peter
Exact Robertson-Walker Cosmological Solutions Containing Relativistic Fluids—J. Peter Vajk. 10, 1145 (1969)
van der MERWE, Alwyn J.
Second-Order Dispersion-Energy Series for Axially Symmetric Molecules—Johannes H. van der Merwe and Alwyn J. van der Merwe. 10, 539 (1969)
van der MERWE, Johannes H.
Second-Order Dispersion-Energy Series for Axially Symmetric Molecules—Johannes H. van der Merwe and Alwyn J. van der Merwe. 10, 539 (1969)
VELO, G.
Partial-Wave Expansion in the Crossed Channel for Scattering Amplitudes Invariant under the Galilei Group—J. L. Gervais and G. Velo. 10, 1265 (1969)
VEZZETTI, David J.
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)
WAIT, James R.
Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)
WATSON, Kenneth M.
Multiple Scattering of Electromagnetic Waves in an Underdense Plasma—Kenneth M. Watson. 10, 688 (1969)
WEAVER, David L.
Wave Equations, Multipole Solutions, and Characteristic Hypersurfaces for Massless Particles—Jack P. Hajj and David L. Weaver. 10, 1185 (1969)
WEBER, T. A.
V-Particle Decay in the Lee Model—C. L. Hammer and T. A. Weber. 10, 2067 (1969)
WHITTEN, R. C.
Potentials for Three-Body Systems—R. C. Whitten. 10, 1631 (1969)
WILLIAMS, Ruth M.
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \otimes SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)
WONG, Jack
On a Condition for Completeness—Jack Wong. 10, 1438 (1969)
WONG, M. K. F.
Representations of the Orthogonal Group. II. Polynomial Bases for the Irreducible Representations of the Orthogonal Group—M. K. F. Wong. 10, 1065 (1969)
WOOD, D. W.
Critical Point Behavior of the Ising Model with Higher-Neighbor Interactions Present—N. W. Dalton and D. W. Wood. 10, 1271 (1969)
WYBOURNE, B. G.
Hermite's Reciprocity Law and the Angular-Momentum States of Equivalent Particle Configurations—B. G. Wybourne. 10, 467 (1969)

Quasiparticle Formalism and Atomic Shell Theory—M. J. Cunningham and B. G. Wybourne. 10, 2149 (1969)

YAJIMA, Nobuo
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

YANG, C. N.
Thermodynamics of a One-Dimensional System of Bosons with Repulsive Delta-Function Interaction—C. N. Yang and C. P. Yang. 10, 1115 (1969)

YANG, C. P.
Thermodynamics of a One-Dimensional System of Bosons with Repulsive Delta-Function Interaction—C. N. Yang and C. P. Yang. 10, 1115 (1969)

YEDINAK, Peter D.
Lattice Dynamics of Simple Cubic Lattices with Long-Range Interactions—John A. Davies and Peter D. Yedinak. 10, 1090 (1969)

YEH, C.
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)

YOSELOFF, Mark L.
Combinatorial Approach to the *N*-Representability of *P*-Density Matrices—Mark L. Yoseloff and Harold W. Kuhn. 10, 703 (1969)

YU, Wing-Yin
Determination of Invariant Amplitudes from Experimental Observables—Michael J. Moravcsik and Wing-Yin Yu. 10, 925 (1969)

ZACHARY, W. W.
Sufficient Conditions for Stability of the Faddeev Equations—W. W. Zachary. 10, 1098 (1969)

ZAIKOV, R. P.
Spectral Representation of the Covariant Two-Point Function and Infinite-Component Fields with Arbitrary Mass Spectrum—I. T. Todorov and R. P. Zaikov. 10, 2014 (1969)

ZICKENDRAHT, W.
Configuration-Space Approach to the Four-Particle Problem—W. Zickendraht. 10, 30 (1969)

ZIMERING, Shimshon
Some Asymptotic Behavior of Stieltjes Transforms—Shimshon Zimering. 10, 181 (1969)

ZIMMERMAN, Robert L.
Bound States of a New Kind in Quantum Field Theory—Robert L. Zimmerman. 10, 509 (1969)
Functional Integration and the Generalized Matthews-Salam Equations—Robert L. Zimmerman. 10, 2169 (1969)

ZWEIFEL, P. F.
Relationships among Generalized Phase-Space Distributions—G. C. Summerfield and P. F. Zweifel. 10, 233 (1969)

ZWEIFEL, P. F.
Invariant Imbedding and Case Eigenfunctions—S. Pahor and P. F. Zweifel. 10, 581 (1969)

ANALYTIC SUBJECT INDEX TO VOLUME 10

Entries are arranged under headings in ascending page number order.

ACOUSTICS

Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)

ALGEBRA

Note on Two Binomial Coefficient Identities of Rosenbaum—H.W. Gould. 10, 49 (1969)

Classification and Complete Reducibility of Representations of Compact Inhomogeneous Groups and Algebras—R. Mirman. 10, 331 (1969)

Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)

Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)

Determination of Invariant Amplitudes from Experimental Observables—Michael J. Moravcsik and Wing-Yin Yu. 10, 925 (1969)

Gel'fand–Kirillov Conjecture on the Lie Field of an Algebraic Lie Algebra—Yutze Chow. 10, 975 (1969)

Further Note on Two Binomial Coefficient Identities of Rosenbaum—David Chiang. 10, 2098 (1969)

ALGEBRA, REPRESENTATIONS OF

Classification and Complete Reducibility of Representations of Compact Inhomogeneous Groups and Algebras—R. Mirman. 10, 331 (1969)

Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

Degenerate Representations of the Symplectic Groups. II. The Noncompact Group $Sp(p,q)$—P. Pajas. 10, 1777 (1969)

New Methods for Reduction of Group Representations. III—John R. Gabriel. 10, 1789 (1969)

Internal Multiplicity Structure for the Chain $SU(n) \supset SU(n-1) \supset \cdots \supset SU(2)$—D. Radhakrishnan. 10, 2129 (1969)

ANALYSIS

Note on Two Binomial Coefficient Identities of Rosenbaum—H.W. Gould. 10, 49 (1969)

Some Asymptotic Behavior of Stieltjes Transforms—Shimshon Zimering. 10, 181 (1969)

Closed-Form Solution of the Differential Equation $\left(\frac{\partial^2}{\partial x \partial y} + ax\frac{\partial}{\partial x} + by\frac{\partial}{\partial y} + cxy + \frac{\partial}{\partial t}\right)P = 0$ Subject to the Initial Condition $P(x,y,t=0) = \Phi(x,y)$—J. L. Neuringer. 10, 250 (1969)

Spectral Theory of the Difference Equation $f(n+1) + f(n-1) = [E - \varphi(n)]f(n)$—Platon C. Deliyannis and Evangelos K. Ifantis. 10, 421 (1969)

Powers of the D Functions—Jagannathan Gomatam and F. Rohrlich. 10, 614 (1969)

Evaluation of "Kondo" Integrals—M. L. Glasser. 10, 1105 (1969)

On a Condition for Completeness—Jack Wong. 10, 1438 (1969)

Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)

Properties of Generalizations to Padé Approximants—A. K. Common. 10, 1875 (1969)

ANALYSIS—DIFFERENTIAL AND INTEGRAL EQUATIONS

Solutions of the Zero-Rest-Mass Equations—Roger Penrose. 10, 38 (1969)

Closed-Form Solution of the Differential Equation $\left(\frac{\partial^2}{\partial x \partial y} + ax\frac{\partial}{\partial x} + by\frac{\partial}{\partial y} + cxy + \frac{\partial}{\partial t}\right)P = 0$ Subject to the Initial Condition $P(x,y,t=0) = \Phi(x,y)$—J. L. Neuringer. 10, 250 (1969)

Perturbation Theory of Nonlinear Boundary-Value Problems—Martin H. Millman and Joseph B. Keller. 10, 342 (1969)

Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)

Invariants to All Orders in Classical Perturbation Theory—Timothy P. Coffey, Jr. 10, 426 (1969)

Complementary Bounds for Ground-State Energies—Peter D. Robinson. 10, 472 (1969)

Sufficiency Condition for the Validity of the WKB Approximation—F. H. Northover. 10, 715 (1969)

Nonlinear Perturbations—Timothy P. Coffey and G. W. Ford. 10, 998 (1969)

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

Existence of Solutions for Certain Nonlinear Boundary-Value Problems—L. F. Shampine. 10, 1177 (1969)

Motion of a Charged Particle in a Spatially Periodic Magnetic Field—Timothy P. Coffey. 10, 1362 (1969)

Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)

Linear Physical Chains with Sturm-Liouville Characteristic Polynomials—F. L. Cook and J. W. Jayne. 10, 1670 (1969)

Diffraction of Plane Acoustic Waves and Pulses as a Singular Perturbation Problem—Edward Y. Harper. 10, 1795 (1969)

Wiener-Hopf Method and Generalized Integral Transforms—A. Bassetto and F. Paccanoni. 10, 1809 (1969)

Diffusion in Nonlinear Multiplicative Media—José Canosa. 10, 1862 (1969)

Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

ANALYSIS—FUNCTION SPACE INTEGRATION

Functional Integrals Representing Distribution Functions in Statistical Mechanics—Clas Blomberg. 10, 675 (1969)

On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)

Kernel Integral Formulas for the Canonical Commutation Relations of Quantum Fields. I. Representations with Cyclic Field—Gerhard C. Hegerfeldt. 10, 1681 (1969)

Feynman Path Integrals and Scattering Theory—Donald Gelman and Larry Spruch. 10, 2240 (1969)

ANALYSIS—SEVERAL COMPLEX VARIABLES WITH APPLICATIONS TO SINGULARITIES IN SCATTERING AMPLITUDES

S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)
Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)

ANALYSIS—SPECIAL FUNCTIONS

Note on Two Binomial Coefficient Identities of Rosenbaum—H.W. Gould. 10, 49 (1969)
Analytic Continuation of Appell's Hypergeometric Series F_2 to the Vicinity of the Singular Point $x = 1$, $y = 1$—G. E. Hahne. 10, 524 (1969)
Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Inverse Functions of the Products of Two Bessel Functions—William Sollfrey. 10, 1429 (1969)
Mth Power of an $N \times N$ Matrix and Its Connection with the Generalized Lucas Polynomials—Richard Barakat and Elizabeth Baumann. 10, 1474 (1969)
On the Combinatorial Structure of State Vectors in $U(n)$. II. The Generalization of Hypergeometric Functions on $U(n)$ States—Mikael Ciftan. 10, 1635 (1969)
Linear Physical Chains with Sturm-Liouville Characteristic Polynomials—F. L. Cook and J. W. Jayne. 10, 1670 (1969)
Concerning the Zeros of Some Functions Related to Bessel Functions—Timothy H. Boyer. 10, 1729 (1969)
Two-Variable Expansion of the Scattering Amplitude: An Application of Appell's Generalized Hypergeometric Functions—John M. Charap and B. M. Minton. 10, 1823 (1969)
Further Note on Two Binomial Coefficient Identities of Rosenbaum—David Chiang. 10, 2098 (1969)

ANGULAR MOMENTUM

Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)
Potentials for Three-Body Systems—R. C. Whitten. 10, 1631 (1969)
Group Analysis of Maxwell's Equations—Moshe Carmeli. 10, 1699 (1969)
Quasiparticle Formalism and Atomic Shell Theory—M. J. Cunningham and B. G. Wybourne. 10, 2149 (1969)

APPROXIMATION THEORY

Perturbation Theory of Nonlinear Boundary-Value Problems—Martin H. Millman and Joseph B. Keller. 10, 342 (1969)
Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)
Sufficiency Condition for the Validity of the WKB Approximation—F. H. Northover. 10, 715 (1969)
Best Error Bounds for Padé Approximants to Convergent Series of Stieltjes—George A. Baker, Jr. 10, 814 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Exact Quantization Conditions. II—J. B. Krieger. 10, 1455 (1969)
Properties of Generalizations to Padé Approximants—A. K. Common. 10, 1875 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)
Application of Perturbation Theory to Many-Body Systems with Localized Particles—C. C. Rousseau and D. P. Saylor. 10, 2179 (1969)

BIOPHYSICS

Periodic Small-Amplitude Solutions to Volterra's Problem of Two Conflicting Populations and Their Application to the Plasma Continuity Equations—J. Reece Roth. 10, 1412 (1969)

BOOTSTRAPS

Crossing and Unitarity in a Multichannel Static Model. II.—P. O. G. Ehrhardt and D. B. Fairlie. 10, 339 (1969)

CHEMICAL PHYSICS

Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)

CLASSICAL MECHANICS

Invariants to All Orders in Classical Perturbation Theory—Timothy P. Coffey, Jr. 10, 426 (1969)
Hamilton-Dirac Theory of Hamilton's Equations—Robert G. Cawley. 10, 928 (1969)
Nonlinear Perturbations—Timothy P. Coffey and G. W. Ford. 10, 998 (1969)
Phase-Integral Approximation in Momentum Space and the Bound States of an Atom. II—Martin C. Gutzwiller. 10, 1004 (1969).
General Interaction Picture from Action Principle for Mechanics—L. M. Garrido. 10, 1045 (1969)
Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)
Motion of a Charged Particle in a Spatially Periodic Magnetic Field—Timothy P. Coffey. 10, 1362 (1969)
Diffraction of Plane Acoustic Waves and Pulses as a Singular Perturbation Problem—Edward Y. Harper. 10, 1795 (1969)
Alternative Dynamics for Classical Relativistic Particles—Amnon Katz. 10, 1929 (1969)
Physical Regions of Six-Particle Processes—Richard P. McNeil and Richard A. Morrow. 10, 2185 (1969)
Spectral Analysis of Classical Central Force Motion—Reese T. Prosser. 10, 2233 (1969)

CONSERVATION LAWS

Generalization of Green's Theorem—Joshua N. Goldberg and Ezra T. Newman. 10, 369 (1969)

Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
Partial Separation of the Schrödinger Equation for Two Charged Particles in a Magnetic Field—Benjamin P. Carter. 10, 788 (1969)
Periodic Small-Amplitude Solutions to Volterra's Problem of Two Conflicting Populations and Their Application to the Plasma Continuity Equations—J. Reece Roth. 10, 1412 (1969)

CONTINUUM MECHANICS

Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)
Bounds for Effective Bulk Modulus of Heterogeneous Materials—Melvin N. Miller. 10, 2005 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

COOPERATIVE PHENOMENA, THEORY OF

Broken Symmetry and Generalized Bose Condensation in Restricted Geometries—M. D. Girardeau. 10, 993 (1969)
Dynamics near Equilibrium of Systems Described in Thermal Hartree-Fock Approximation—B. U. Felderhof. 10 1021 (1969)
Next-Nearest-Neighbor Ising Model—R. W. Gibberd. 10, 1026 (1969)
F Model on a Triangular Lattice—R. J. Baxter. 10, 1211 (1969)
Critical Point Behavior of the Ising Model with Higher-Neighbor Interactions Present—N. W. Dalton and D. W. Wood. 10, 1271 (1969)
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
Phase Transition in Zero Dimensions: A Remark on the Spherical Model—Elliott H. Lieb and Colin J. Thompson. 10, 1403 (1969)
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)
Generalized Triangular Ising Lattice—R. G. J. Mills and C. A. Hurst. 10, 1531 (1969)
Rigorous Results for Ising Ferromagnets of Arbitrary Spin—Robert B. Griffiths. 10, 1559 (1969)
Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)
One-Dimensional Bonded Fluids—G. M. Bell. 10, 1753 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)
Soluble Model of Condensation—M. D. Girardeau. 10, 1914 (1969)
Kinematic Interaction for the Heisenberg Antiferromagnet at Low Temperature—D. C. Herbert. 10, 2255 (1969)

COSMOLOGY

Exact Robertson-Walker Cosmological Solutions Containing Relativistic Fluids—J. Peter Vajk. 10, 1145 (1969)
Covariant Electromagnetic Potentials and Fields in Friedmann Universes—P. C. Peters. 10, 1216 (1969)
General Form of the Einstein Equations for a Blanchi Type IX Universe—Michael P. Ryan, Jr. 10, 1724 (1969)

DENSITY MATRICES

Linear Inequalities for Density Matrices—Ernest R. Davidson. 10, 725 (1969)

DIFFRACTION THEORY

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)
High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)
Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)
Diffraction of Electromagnetic Waves by a Right-Angle Dielectric Wedge—Edgar A. Kraut and Guy W. Lehman. 10, 1340 (1969)
Diffraction of Plane Acoustic Waves and Pulses as a Singular Perturbation Problem—Edward Y. Harper. 10, 1795 (1969)
Diffraction by a Slit or Strip—Paul B. Bailey and George E. Barr. 10, 1906 (1969)
On the Uncoupling of Wiener-Hopf Equations for Half-Plane Diffraction Problems in a Gyrotropic Medium—H. S. Tan and D. K. Cheng. 10, 1957 (1969)
Uniform Asymptotic Theory of Edge Diffraction—Robert M. Lewis and Johannes Boersma. 10, 2291 (1969)

DISCRETE SYMMETRIES

Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)

DISPERSION THEORY

Physical-Region Discontinuity Equations for Many-Particle Scattering Amplitudes. I—Joseph Coster and Henry P. Stapp. 10, 371 (1969)
Second-Order Dispersion-Energy Series for Axially Symmetric Molecules—Johannes H. van der Merwe and Alwyn J. van dér Merwe. 10, 539 (1969)
Exact Static-Model Bootstrap Solutions for Arbitrary 2 × 2 Crossing Matrices—James T. Cushing. 10, 1319 (1969)

ERRATA

Erratum: Strong-Coupling Limit in Potential Theory. II—William M. Frank. 10, 2128 (1969)

ELECTROSTATICS AND ELECTRODYNAMICS

Theoretical Study of Finite Dielectric-Coated Cylindrical Antenna—Chung-Yu Ting. 10, 480 (1969)
Second-Order Dispersion-Energy Series for Axially Symmetric Molecules—Johannes H. van der Merwe and Alwyn J. van der Merwe. 10, 539 (1969)
Considerations on the Classical Spinning Electron—Jack Cohn. 10, 799 (1969)
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)

Covariant Electromagnetic Potentials and Fields in Friedmann Universes—P. C. Peters. 10, 1216 (1969)
Instantaneous Action-at-a-Distance Formulation of Classical Electrodynamics—Frederick James Kennedy. 10, 1349 (1969)
Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)
Group Analysis of Maxwell's Equations—Moshe Carmeli. 10, 1699 (1969)
Numerical Solution of Integral Equations Using Legendre Polynomials—H. Kschwendt. 10, 1964 (1969)
Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)

ELEMENTARY PARTICLES, SYMMETRY OF

Realization of Chiral Symmetry in a Curved Isospin Space—Kurt Meetz. 10, 589 (1969)
On the Isospin Crossing Matrix—Huan Lee. 10, 779 (1969)
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \otimes SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)
$SU(6)$ Clebsch–Gordan Coefficients for the Product $35 \otimes 70$—J. C. Carter and J. J. Coyne. 10, 1204 (1969)

ELEMENTARY PARTICLES, THEORY OF

Partial-Wave Analysis in Terms of $SL(2, C)/SU(2)$ Harmonic Functions—Awele Maduemezia. 10, 519 (1969)
Determination of Invariant Amplitudes from Experimental Observables—Michael J. Moravcsik and Wing-Yin Yu. 10, 925 (1969)
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

FIELD THEORY, AXIOMATIC QUANTUM

Partially Alternate Derivation of a Result of Nelson—Paul Federbush. 10, 50 (1969)
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)
Kernel Integral Formulas for the Canonical Commutation Relations of Quantum Fields. I. Representations with Cyclic Field—Gerhard C. Hegerfeldt. 10, 1681 (1969)
Infinite Renormalization of the Hamiltonian Is Necessary—James Glimm and Arthur Jaffe. 10, 2213 (1969)

FIELD THEORY, CLASSICAL

Comments on the Classical Theory of Magnetic Monopoles—Rodger L. Gamblin. 10, 46 (1969)
Generalization of Green's Theorem—Joshua N. Goldberg and Ezra T. Newman. 10, 369 (1969)
Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)
Classical Fields on Spacelike Mass Shells—W. Rühl. 10, 791 (1969)
Considerations on the Classical Spinning Electron—Jack Cohn. 10, 799 (1969)
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Initial Conditions in General Relativity: Lapse and Shift Formulation—Elliot P. Belasco and Hans C. Ohanian. 10, 1503 (1969)
Plane-Symmetric Gauge Field—C. A. Uzes. 10, 1885 (1969)
On the Uncoupling of Wiener–Hopf Equations for Half-Plane Diffraction Problems in a Gyrotropic Medium—H. S. Tan and D. K. Cheng. 10, 1957 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

FIELD THEORY, QUANTUM

Bethe-Salpeter Equation—Michael M. Broido and John G. Taylor. 10, 184 (1969)
Bound States of a New Kind in Quantum Field Theory—Robert L. Zimmerman. 10, 509 (1969)
Electron in a Given Time-Dependent Electromagnetic Field—Anton Z. Capri. 10, 575 (1969)
Powers of the D Functions—Jagannathan Gomatam and F. Rohrlich. 10, 614 (1969)
Renormalization of a Finite Matrix Hamiltonian—Asher Peres. 10, 629 (1969)
Asymptotic Fields in Some Models of Quantum Field Theory. II—Raphael Høegh-Krohn. 10, 639 (1969)
Analytic Representations of Two-Point Functions with Noncanonical Light-Cone Singularities. I—Jerzy Lukierski. 10, 918 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)
Asymptotic Fields of the Lee Model—Stanley Jernow and Emil Kazes. 10, 1326 (1969)
Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)
Kernel Integral Formulas for the Canonical Commutation Relations of Quantum Fields. I. Representations with Cyclic Field—Gerhard C. Hegerfeldt. 10, 1681 (1969)
Spectral Representation of the Covariant Two-Point Function and Infinite-Component Fields with Arbitrary Mass Spectrum—I. T. Todorov and R. P. Zaikov. 10, 2014 (1969)
V-Particle Decay in the Lee Model—C. L. Hammer and T. A. Weber. 10, 2067 (1969)
Accidental Degeneracy in the Bethe–Salpeter Equation—Debabrata Basu and S. N. Biswas. 10, 2104 (1969)
Functional Integration and the Generalized Matthews-Salam Equations—Robert L. Zimmerman. 10, 2169 (1969)
Infinite Renormalization of the Hamiltonian Is Necessary—James Glimm and Arthur Jaffe. 10, 2213 (1969)

GRAVITATION

Nonsaturation of Gravitational Forces—Jean-Marc Lévy-Leblond. 10, 806 (1969)

GROUP THEORY

Inner and Restriction Multiplicity for Classical Groups—R. M. Delaney and B. Gruber. 10, 252 (1969)

Classification and Complete Reducibility of Representations of Compact Inhomogeneous Groups and Algebras—R. Mirman. 10, 331 (1969)
General Approach to Fractional Parentage Coefficients—M. Moshinsky and V. Syamala Devi. 10, 455 (1969)
Hermite's Reciprocity Law and the Angular-Momentum States of Equivalent Particle Configurations—B. G. Wybourne. 10, 467 (1969)
Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)
Lie-like Approach to the Theory of Representations of Finite Groups—A. Gamba. 10, 872 (1969)
On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)
Group Analysis of Maxwell's Equations—Moshe Carmeli. 10, 1699 (1969)
Representation Theory of $SP(4)$ and $SO(5)$—Wayne J. Holman III. 10, 1710 (1969)
Degenerate Representations of the Symplectic Groups. II. The Noncompact Group $Sp(p,q)$—P. Pajas. 10, 1777 (1969)
Representation Theory of SO(4,1) and E(3,1): An Explicit Spinor Calculus—Wayne J. Holman III. 10, 1888 (1969)
Remarks on Lie-Algebra-Invariant Equations. I—Mayer Humi. 10, 1897 (1969)
Remarks on Lie-Algebra-Invariant Equations. II—Mayer Humi. 10, 1900 (1969)
Finite Transformations and Basis States of SU(n)—Douglas Francis Holland. 10, 1903 (1969)
New Methods for Reduction of Group Representations. IV—J. R. Gabriel. 10, 1932 (1969)
Internal Labeling Problem—R. T. Sharp and C. S. Lam. 10, 2033 (1969)
Internal Multiplicity Structure for the Chain $SU(n) \supset SU(n-1) \supset \cdots \supset SU(2)$—D. Radhakrishnan. 10, 2129 (1969)
Character Analysis of $U(N)$ and $SU(N)$—Stephen Blaha. 10, 2156 (1969)

GROUP THEORY AND INVARIANCE PRINCIPLES

Symmetry of the Two-Dimensional Hydrogen Atom—Arturo Cisneros and Harold V. McIntosh. 10, 277 (1969)
Realization of Chiral Symmetry in a Curved Isospin Space—Kurt Meetz. 10, 589 (1969)
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)
Zero-Mass Representation of Poincaré Group and Conformal Invariance—S. K. Bose and R. Parker. 10, 812 (1969)
Plane-Symmetric Gauge Field—C. A. Uzes. 10, 1885 (1969)
Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)
On Canonical $SO(4,1)$ Transformations of the Dirac Equation—A. J. Bracken and H. A. Cohen. 10, 2024 (1969)

GROUP THEORY, POINCARÉ

Unitary Representations of the Poincaré Group Contained in a Class of Representations of the Conformal Group—William H. Klink. 10, 606 (1969)
Classical Fields on Spacelike Mass Shells—W. Rühl. 10, 791 (1969)
Zero-Mass Representation of Poincaré Group and Conformal Invariance—S. K. Bose and R. Parker. 10, 812 (1969)
Partial-Wave Expansion in the Crossed Channel for Scattering Amplitudes Invariant under the Galilei Group—J. L. Gervais and G. Velo. 10, 1265 (1969)
Representation Theory of SO(4,1) and E(3,1): An Explicit Spinor Calculus—Wayne J. Holman III. 10, 1888 (1969)
Spectral Representation of the Covariant Two-Point Function and Infinite-Component Fields with Arbitrary Mass Spectrum—I. T. Todorov and R. P. Zaikov. 10, 2014 (1969)
Irreducibility of the Ladder Representations of $U(2,2)$ when Restricted to the Poincaré Subgroup—G. Mack and I. Todorov. 10, 2078 (1969)
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

GROUP THEORY, REPRESENTATION

Unitary Representation of $SL(2,C)$ in an $E(2)$ Basis—Shau-Jin Chang and L. O'Raifeartaigh. 10, 21 (1969)
Combinatorial Structure of State Vectors in U_R. I. Hook Patterns for Maximal and Semimaximal States in U_R—Mikael Ciftan and L. C. Biedenharn. 10, 221 (1969)
Classification and Complete Reducibility of Representations of Compact Inhomogeneous Groups and Algebras—R. Mirman. 10, 331 (1969)
Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Unitary Representations of the Poincaré Group Contained in a Class of Representations of the Conformal Group—William H. Klink. 10, 606 (1969)
Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)
Application of the Kirillov Theory to the Representations of $O(2,1)$—S. A. Dunne. 10, 860 (1969)
Expansion of Lie Groups and Representations of $SL(3,C)$—N. Mukunda. 10, 897 (1969)
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \circledS SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)
Representations of the Orthogonal Group. II. Polynomial Bases for the Irreducible Representations of the Orthogonal Group—M. K. F. Wong. 10, 1065 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Group Representation in a Continuous Basis: An Example—C. Itzykson. 10, 1109 (1969)
Involutional Matrices Based on the Representation Theory of $GL(2)$—Shoon Kyung Kim. 10, 1225 (1969)
Clebsch-Gordan Coefficients and Functions over Cosets—William H. Klink. 10, 1477 (1969)
On the Combinatorial Structure of State Vectors in $U(n)$. II. The Generalization of Hypergeometric Functions on $U(n)$ States—Mikael Ciftan. 10, 1635 (1969)
Generating Functions of Classical Groups and Evaluation of Partition Functions—T. S. Santhanam. 10, 1704 (1969)
Representation Theory of $SP(4)$ and $SO(5)$—Wayne J. Holman III. 10, 1710 (1969)
Degenerate Representations of the Symplectic Groups. II. The Noncompact Group $Sp(p,q)$—P. Pajas. 10, 1777 (1969)
New Methods for Reduction of Group Representations. III—John R. Gabriel. 10, 1789 (1969)
Representation Theory of SO(4,1) and E(3,1): An Explicit Spinor Calculus—Wayne J. Holman III. 10, 1888 (1969)

New Methods for Reduction of Group Representations. IV—J. R. Gabriel. 10, 1932 (1969)
Spectral Representation of the Covariant Two-Point Function and Infinite-Component Fields with Arbitrary Mass Spectrum—I. T. Todorov and R. P. Zaikov. 10, 2014 (1969)
Internal Labeling Problem—R. T. Sharp and C. S. Lam. 10, 2033 (1969)
Irreducibility of the Ladder Representations of $U(2,2)$ when Restricted to the Poincaré Subgroup—G. Mack and I. Todorov. 10, 2078 (1969)
Matrices of Finite Lorentz Transformations in a Noncompact Basis. I. Discrete Series of $O(2,1)$—N. Mukunda. 10, 2086 (1969)
Matrices of Finite Lorentz Transformations in a Noncompact Basis. II. Continuous Series of $O(2,1)$—N. Mukunda. 10, 2092 (1969)
Internal Multiplicity Structure for the Chain $SU(n) \supset SU(n-1) \supset \cdots \supset SU(2)$—D. Radhakrishnan. 10, 2129 (1969)
Character Analysis of $U(N)$ and $SU(N)$—Stephen Blaha. 10, 2156 (1969)
Substitution Group and the Stretched Isoscalar Factors for the Group R_3—S. J. Ališauskas and A. P. Jucys. 10, 2227 (1969)
Continuous Representation Theory Using the Affine Group—Erik W. Aslaksen and John R. Klauder. 10, 2267 (1969)
Dirac Formalism and Symmetry Problems in Quantum Mechanics. II. Symmetry Problems—J.-P. Antoine. 10, 2276 (1969)

GROUP THEORY, SPECTROSCOPY

Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)
General Approach to Fractional Parentage Coefficients—M. Moshinsky and V. Syamala Devi. 10, 455 (1969)
Hermite's Reciprocity Law and the Angular-Momentum States of Equivalent Particle Configurations—B. G. Wybourne. 10, 467 (1969)
Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)
Algebraic Matrices for the Configurations $(d+s)^n p$—C. Roth. 10, 1038 (1969)
$SU(6)$ Clebsch–Gordan Coefficients for the Product $35 \otimes 70$—J. C. Carter and J. J. Coyne. 10, 1204 (1969)
Group Theory and Mixed Atomic Configurations—J. C. Morrison. 10, 1431 (1969)
On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)
On the Combinatorial Structure of State Vectors in $U(n)$. II. The Generalization of Hypergeometric Functions on $U(n)$ States—Mikael Ciftan. 10, 1635 (1969)
New Methods for Reduction of Group Representations. IV—J. R. Gabriel. 10, 1932 (1969)
Quasiparticle Formalism and Atomic Shell Theory—M. J. Cunningham and B. G. Wybourne. 10, 2149 (1969)

GROUP THEORY, SU_3

Inner and Restriction Multiplicity for Classical Groups—R. M. Delaney and B. Gruber. 10, 252 (1969)
Finite Transformations of $SU3$—Douglas Francis Holland. 10, 531 (1969)
SU_3 Algebra in the Mixed-Shell Space $(0p, 0d, 1s)$. I—Takehiko Ishidzu, Hideo Kawarada, and Masachiyo Sato. 10, 683 (1969)
Representation Functions for $SU(3)$—Jouko Mickelsson. 10, 1968 (1969)

HILBERT SPACE

Dirac Formalism and Symmetry Problems in Quantum Mechanics. I. General Dirac Formalism—J.-P. Antoine. 10, 53 (1969)
Mean Ergodic Theorems in Quantum Mechanics—J. E. Moyal. 10, 506 (1969)
Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)
Group Analysis of Maxwell's Equations—Moshe Carmeli. 10, 1699 (1969)
Degenerate Representations of the Symplectic Groups. II. The Noncompact Group $Sp(p,q)$—P. Pajas. 10, 1777 (1969)

HYDRODYNAMICS

Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)
Korteweg–de Vries Equation and Generalizations. III. Derivation of the Korteweg–de Vries Equation and Burgers Equation—C. H. Su and C. S. Gardner. 10, 536 (1969)

KINETIC THEORY

Kinetic Description of an Inhomogeneous Plasma—A. Kuszell. 10, 210 (1969)
Wave Propagation and Other Spectral Problems in Kinetic Theory—Lawrence Sirovich and James K. Thurber. 10, 239 (1969)
Theory of the Propagation of the Plane-Wave Disturbances in a Distribution of Thermal Neutrons—James J. Duderstadt. 10, 266 (1969)
Normal and Abnormal Diffusion in Ehrenfests' Wind-Tree Model—E. H. Hauge and E. G. D. Cohen. 10, 397 (1969)
Functional Methods in Statistical Mechanics. I. Classical Theory—W. E. Brittin and W. R. Chappell. 10, 661 (1969)
Comments on Kinetic Equations for Autocorrelation Functions—P. Résibois, J. Brocas, and G. Decan. 10, 964 (1969)
Possible Instability of the Cut-Contributions to the Ring Equations—M. Baus. 10, 1494 (1969)
Model for the Derivation of Kinetic Theory—G. V. Ramanathan and G. Sandri. 10, 1763 (1969)

LATTICE VIBRATIONS

Frequency Spectrum and Momentum Autocorrelation Function for a Simple Lattice—E. M. Baroody. 10, 475 (1969)
Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)
Quadratic Action Principle of Relativity—C. Lanczos. 10, 1057 (1969)
Lattice Dynamics of Simple Cubic Lattices with Long-Range Interactions—John A. Davies and Peter D. Yedinak. 10, 1090 (1969)
Linear Physical Chains with Sturm-Liouville Characteristic Polynomials—F. L. Cook and J. W. Jayne. 10, 1670 (1969)

MANY-BODY PROBLEMS

Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)

Lower Bounds to the Ground-State Energy of Systems Containing Identical Particles—F. Calogero and C. Marchioro. 10, 562 (1969)

Ground-State Many-Boson Problem with Repulsive Potentials—Leonard Eyges. 10, 644 (1969)

Combinatorial Approach to the N-Representability of P-Density Matrices—Mark L. Yoseloff and Harold W. Kuhn. 10, 703 (1969)

Nonsaturation of Gravitational Forces—Jean-Marc Lévy-Leblond. 10, 806 (1969)

Dynamics near Equilibrium of Systems Described in Thermal Hartree–Fock Approximation—B. U. Felderhof. 10 1021 (1969)

Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)

Thermodynamics of a One-Dimensional System of Bosons with Repulsive Delta-Function Interaction—C. N. Yang and C. P. Yang. 10, 1115 (1969)

Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)

Single-Particle Condensate and Pair-Correlation Theory of Inhomogeneous Boson Systems—Donald H. Kobe. 10, 1507 (1969)

On the Combinatorial Structure of State Vectors in $U(n)$. II. The Generalization of Hypergeometric Functions on $U(n)$ States—Mikael Ciftan. 10, 1635 (1969)

Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)

Self-Consistent Approximations in Many-Body Systems—M. Revzen and L. E. H. Trainor. 10, 1804 (1969)

Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)

Boson Formalism in Superconductivity—L. Leplae and H. Umezawa. 10, 2038 (1969)

Quasiparticle Formalism and Atomic Shell Theory—M. J. Cunningham and B. G. Wybourne. 10, 2149 (1969)

Application of Perturbation Theory to Many-Body Systems with Localized Particles—C. C. Rousseau and D. P. Saylor. 10, 2179 (1969)

Solution of a Three-Body Problem in One Dimension—F. Calogero. 10, 2191 (1969)

Ground State of a One-Dimensional N-Body System—F. Calogero. 10, 2197 (1969)

Self-Consistent Approximations in Many-Body Systems. II—O. Shlidor and M. Revzen. 10, 2201 (1969)

Kinematic Interaction for the Heisenberg Antiferromagnet at Low Temperature—D. C. Herbert. 10, 2255 (1969)

MATRICES

Renormalization of a Finite Matrix Hamiltonian—Asher Peres. 10, 629 (1969)

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

Involutional Matrices Based on the Representation Theory of $GL(2)$—Shoon Kyung Kim. 10, 1225 (1969)

Mth Power of an $N\times N$ Matrix and Its Connection with the Generalized Lucas Polynomials—Richard Barakat and Elizabeth Baumann. 10, 1474 (1969)

Properties of Overcomplete and Nonorthogonal Basis Vectors—D. J. Rowe. 10, 1774 (1969)

Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

NEUTRON TRANSPORT THEORY

Theory of the Propagation of the Plane-Wave Disturbances in a Distribution of Thermal Neutrons—James J. Duderstadt. 10, 266 (1969)

Elementary Solutions of the Reduced Three-Dimensional Transport Equation—Hans G. Kaper. 10, 286 (1969)

Invariant Imbedding and Case Eigenfunctions—S. Pahor and P. F. Zweifel. 10, 581 (1969)

Analytical Solutions of the Neutron Transport Equation in Arbitrary Convex Geometry—Alan G. Gibbs. 10, 875 (1969)

On Continuous Eigenvalues in Neutron Thermalization—Masamichi Tokizawa. 10, 1834 (1969)

Half-Space Multigroup Transport Theory—S. Pahor and J. K. Shultis. 10, 2220 (1969)

NONEQUILIBRIUM THERMODYNAMICS

On Perturbation Expansions for Real-Time Green's Functions—Victor Korenman. 10, 1387 (1969)

Vacancy Annihilation for One-Dimensional Dumbell Kinetics—R. B. McQuistan. 10, 2205 (1969)

NUCLEAR MANY-BODY PROBLEMS

SU_3 Algebra in the Mixed-Shell Space ($0p$, $0d$, $1s$). I—Takehiko Ishidzu, Hideo Kawarada, and Masachiyo Sato. 10, 683 (1969)

Combinatorial Approach to the N-Representability of P-Density Matrices—Mark L. Yoseloff and Harold W. Kuhn. 10, 703 (1969)

Criteria for Slater Determinants and Quasiparticle Vacuum States—A. Navon. 10, 821 (1969)

Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)

Solution of the Faddeev Equation for Local Potentials by Approximate Product-Integration—Y. E. Kim. 10, 1491 (1969)

On the Wigner Supermultiplet Scheme—K. T. Hecht and Sing Chin Pang. 10, 1571 (1969)

Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)

Properties of Overcomplete and Nonorthogonal Basis Vectors—D. J. Rowe. 10, 1774 (1969)

Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)

NUMERICAL METHODS

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

Algorithm for the Calculation of the Classical Equations of Motion of an N-Body System—Don E. Harrison, Jr., Warren L. Gay, and H. M. Effron. 10, 1179 (1969)

New Methods for Reduction of Group Representations. III—John R. Gabriel. 10, 1789 (1969)

Numerical Solution of Integral Equations Using Legendre Polynomials—H. Kschwendt. 10, 1964 (1969)

OPERATOR ORDERING METHODS

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)

OPTICS

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)
High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Dynamics in the Diagonal Coherent-State Representation—Marvin M. Miller. 10, 1406 (1969)
Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

PARTICLE PHYSICS, FOUNDATIONS OF

Short-Range Interactions and Analyticity in Momentum-Transfer—J. D. Finley III. 10, 2047 (1969)
Possible Characterization of Short-Range Interactions—J. D. Finley III. 10, 2060 (1969)
V-Particle Decay in the Lee Model—C. L. Hammer and T. A. Weber. 10, 2067 (1969)
Physical Regions of Six-Particle Processes—Richard P. McNeil and Richard A. Morrow. 10, 2185 (1969)

PHASE TRANSITIONS, THEORY OF

Broken Symmetry and Generalized Bose Condensation in Restricted Geometries—M. D. Girardeau. 10, 993 (1969)
Next-Nearest-Neighbor Ising Model—R. W. Gibberd. 10, 1026 (1969)
Magnetization of Ising Model in Nonzero Magnetic Field—Daniel C. Mattis and Michael Plischke. 10, 1107 (1969)
F Model on a Triangular Lattice—R. J. Baxter. 10, 1211 (1969)
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
Phase Transition in Zero Dimensions: A Remark on the Spherical Model—Elliott H. Lieb and Colin J. Thompson. 10, 1403 (1969)
On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)
Generalized Triangular Ising Lattice—R. G. J. Mills and C. A. Hurst. 10, 1531 (1969)
One-Dimensional Phase Transition—Joseph L. Strecker. 10, 1541 (1969)
Rigorous Results for Ising Ferromagnets of Arbitrary Spin—Robert B. Griffiths. 10, 1559 (1969)
Soluble Model of Condensation—M. D. Girardeau. 10, 1914 (1969)

PLASMA PHYSICS

Instability of Transverse Waves in a Relativistic Plasma—I. Lerche. 10, 13 (1969)
Kinetic Description of an Inhomogeneous Plasma—A. Kuszell. 10, 210 (1969)
Isoperimetric Solutions Related to the Thermodynamics of Plasmas—Robert L. W. Chen and Thomas H. Neighbors III. 10, 439 (1969)
Korteweg–de Vries Equation and Generalizations. III. Derivation of the Korteweg–de Vries Equation and Burgers Equation—C. H. Su and C. S. Gardner. 10, 536 (1969)
Functional Methods in Statistical Mechanics. I. Classical Theory—W. E. Brittin and W. R. Chappell. 10, 661 (1969)
Multiple Scattering of Electromagnetic Waves in an Underdense Plasma—Kenneth M. Watson. 10, 688 (1969)
Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)
Periodic Small-Amplitude Solutions to Volterra's Problem of Two Conflicting Populations and Their Application to the Plasma Continuity Equations—J. Reece Roth. 10, 1412 (1969)
Possible Instability of the Cut-Contributions to the Ring Equations—M. Baus. 10, 1494 (1969)
Perturbation Method for a Nonlinear Wave Modulation. II—Naruyoshi Asano, Tosiya Taniuti, and Nobuo Yajima. 10, 2020 (1969)

POLYMER PHYSICS

One-Dimensional Bonded Fluids—G. M. Bell. 10, 1753 (1969)
Numerical Solution of Integral Equations Using Legendre Polynomials—H. Kschwendt. 10, 1964 (1969)

QUANTUM ELECTRONICS

Quantum Harmonic Oscillator with Time-Dependent Frequency—S. Solimeno, P. Di Porto, and B. Crosignani. 10, 1922 (1969)

QUANTUM MECHANICS

Dirac Formalism and Symmetry Problems in Quantum Mechanics. I. General Dirac Formalism—J.-P. Antoine. 10, 53 (1969)
Inversion Problem with Separable Potentials—Robert L. Mills and John F. Reading. 10, 321 (1969)
Hermite's Reciprocity Law and the Angular-Momentum States of Equivalent Particle Configurations—B. G. Wybourne. 10, 467 (1969)
Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)
Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)
Partial Separation of the Schrödinger Equation for Two Charged Particles in a Magnetic Field—Benjamin P. Carter. 10, 788 (1969)
Determination of Invariant Amplitudes from Experimental Observables—Michael J. Moravcsik and Wing-Yin Yu. 10, 925 (1969)
Degenerate Representation Functions for $SO(\nu)$, $SU(\nu)$, and $SU(\nu) \odot SU(\nu)$ and Their Analytical Reductions—R. Delbourgo, K. Koller, and Ruth M. Williams. 10, 957 (1969)
Phase-Integral Approximation in Momentum Space and the Bound States of an Atom. II—Martin C. Gutzwiller. 10, 1004 (1969).
Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)

Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)
Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)
Summation over Feynman Histories in Polar Coordinates—D. Peak and A. Inomata. 10, 1422 (1969)
An Exact Quantum Theory of the Time-Dependent Harmonic Oscillator and of a Charged Particle in a Time-Dependent Electromagnetic Field—H. R. Lewis, Jr., and W. B. Riesenfeld. 10, 1458 (1969)
New Formulation of Stochastic Theory and Quantum Mechanics—L. de la Peña-Auerbach. 10, 1620 (1969)
Potentials for Three-Body Systems—R. C. Whitten. 10, 1631 (1969)
Properties of Overcomplete and Nonorthogonal Basis Vectors—D. J. Rowe. 10, 1774 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)
Quantum Harmonic Oscillator with Time-Dependent Frequency—S. Solimeno, P. Di Porto, and B. Crosignani. 10, 1922 (1969)
Canonical Transformations and Spectra of Quantum Operators—Boris Leaf. 10, 1971 (1969)
Canonical Operators for the Simple Harmonic Oscillator—Boris Leaf. 10, 1980 (1969)
Canonical States in Quantum Statistical Mechanics—Robert E. Kvarda. 10, 2208 (1969)

QUANTUM THEORY

Configuration-Space Approach to the Four-Particle Problem—W. Zickendraht. 10, 30 (1969)
Partially Alternate Derivation of a Result of Nelson—Paul Federbush. 10, 50 (1969)
Mean Ergodic Theorems in Quantum Mechanics—J. E. Moyal. 10, 506 (1969)
Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)
Linear Inequalities for Density Matrices—Ernest R. Davidson. 10, 725 (1969)
Projection of Exact Spin Eigenfunctions—Vedene H. Smith, Jr. and Frank E. Harris. 10, 771 (1969)
Partial Separation of the Schrödinger Equation for Two Charged Particles in a Magnetic Field—Benjamin P. Carter. 10, 788 (1969)
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)
Transverse Dielectric Tensor for a Free-Electron Gas in a Uniform Magnetic Field—V. Arunasalam. 10, 1305 (1969)
An Exact Quantum Theory of the Time-Dependent Harmonic Oscillator and of a Charged Particle in a Time-Dependent Electromagnetic Field—H. R. Lewis, Jr., and W. B. Riesenfeld. 10, 1458 (1969)
Properties of "Quadratic" Canonical Commutation Relation Representations—John R. Klauder and L. Streit. 10, 1661 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)
Statistical Average of Product of Phase Sums Arising in the Study of Disordered Lattices—Priyamvada Sah. 10, 2263 (1969)
Dirac Formalism and Symmetry Problems in Quantum Mechanics. II. Symmetry Problems—J.-P. Antoine. 10, 2276 (1969)

QUANTUM THEORY, ABSTRACT

Dirac Formalism and Symmetry Problems in Quantum Mechanics. I. General Dirac Formalism—J.-P. Antoine. 10, 53 (1969)
Measure-Theoretical Description of Klein-Gordon Multiparticle States—Eduard Prugovečki. 10, 933 (1969)
On the Growth of the Number of Bound States with Increase in Potential Strength—Barry Simon. 10, 1123 (1969)
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)
Generalized Bose Operators in the Fock Space of a Single Bose Operator—Richard A. Brandt and O. W. Greenberg. 10, 1168 (1969)
On the Growth of the Ground-State Binding Energy with Increase in Potential Strength—Barry Simon. 10, 1415 (1969)
An Exact Quantum Theory of the Time-Dependent Harmonic Oscillator and of a Charged Particle in a Time-Dependent Electromagnetic Field—H. R. Lewis, Jr., and W. B. Riesenfeld. 10, 1458 (1969)
Quantization of the Generalized Hamiltonian—C. F. Hayes. 10, 1555 (1969)
Theory of Observables—Platon C. Deliyannis. 10, 2114 (1969)
Canonical States in Quantum Statistical Mechanics—Robert E. Kvarda. 10, 2208 (1969)
Continuous Representation Theory Using the Affine Group—Erik W. Aslaksen and John R. Klauder. 10, 2267 (1969)

QUANTUM THEORY, MANY-BODY

Partially Alternate Derivation of a Result of Nelson—Paul Federbush. 10, 50 (1969)
Problem of Two Spin Deviations in a Linear Chain with Next-Nearest-Neighbor Interactions—Chanchal K. Majumdar. 10, 177 (1969)
Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)
Lower Bounds to the Ground-State Energy of Systems Containing Identical Particles—F. Calogero and C. Marchioro. 10, 562 (1969)
Ground-State Many-Boson Problem with Repulsive Potentials—Leonard Eyges. 10, 644 (1969)
Combinatorial Approach to the N-Representability of P-Density Matrices—Mark L. Yoseloff and Harold W. Kuhn. 10, 703 (1969)
Nonsaturation of Gravitational Forces—Jean-Marc Lévy-Leblond. 10, 806 (1969)
Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)
Proof of the Symmetrization Postulate—M. D. Girardeau. 10, 1302 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. I—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1388 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. II—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1399 (1969)
Single-Particle Condensate and Pair-Correlation Theory of Inhomogeneous Boson Systems—Donald H. Kobe. 10, 1507 (1969)
On the Renormalization of the Susceptibility of a Fermi Liquid—Daniel J. Amit. 10, 1617 (1969)
Critical-Point Singularities of the Perturbation Series for the Ground State of a Many-Fermion System—George A. Baker, Jr., and Joseph Kahane. 10, 1647 (1969)

Reduced Density Matrices of Energy Eigenstates—Mitja Rosina, Jerome K. Percus, Louis J. Kijewski, and Claude Garrod. 10, 1761 (1969)
Cluster Expansion in a Bose System—M. Howard Lee. 10, 1813 (1969)
Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)
Soluble Model of Condensation—M. D. Girardeau. 10, 1914 (1969)
N-Representability Theorem for Reduced Density Matrices—Hsiao S. Kiang. 10, 1920 (1969)
Solution of a Three-Body Problem in One Dimension—F. Calogero. 10, 2191 (1969)
Ground State of a One-Dimensional *N*-Body System—F. Calogero. 10, 2197 (1969)
Kinematic Interaction for the Heisenberg Antiferromagnet at Low Temperature—D. C. Herbert. 10, 2255 (1969)

QUANTUM THEORY (PERTURBATION THEORY)

Complementary Bounds for Ground-State Energies—Peter D. Robinson. 10, 472 (1969)
Renormalization of a Finite Matrix Hamiltonian—Asher Peres. 10, 629 (1969)
Nonlinear Perturbations—Timothy P. Coffey and G. W. Ford. 10, 998 (1969)
Expansion of the Density Matrix of an *N*-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuyā and Oktay Sinanoğlu. 10, 1032 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Partial Sums of Vaccum Polarization Graphs—James P. Fink. 10, 1440 (1969)
Exact Quantization Conditions. II—J. B. Krieger. 10, 1455 (1969)
Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)
Treatment of Degeneracies in the Schrödinger Perturbation Theory by Partitioning Technique—Jong H. Choi. 10, 2142 (1969)
Application of Perturbation Theory to Many-Body Systems with Localized Particles—C. C. Rousseau and D. P. Saylor. 10, 2179 (1969)
Statistical Average of Product of Phase Sums Arising in the Study of Disordered Lattices—Priyamvada Sah. 10, 2263 (1969)

RADIATION

Theoretical Study of Finite Dielectric-Coated Cylindrical Antenna—Chung-Yu Ting. 10, 480 (1969)
Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

RADIATIVE TRANSFER

Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)

RANDOM MEDIA

Multiple Scattering of Electromagnetic Waves in an Underdense Plasma—Kenneth M. Watson. 10, 688 (1969)
Statistical Properties of Polycrystalline Dielectrics—John E. Molyneux. 10, 912 (1969)
Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)
Bounds for Effective Bulk Modulus of Heterogeneous Materials—Melvin N. Miller. 10, 2005 (1969)
Statistical Average of Product of Phase Sums Arising in the Study of Disordered Lattices—Priyamvada Sah. 10, 2263 (1969)

REGGE THEORY OF COMPLEX ANGULAR MOMENTUM

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)
High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)
Wiener-Hopf Method and Generalized Integral Transforms—A. Bassetto and F. Paccanoni. 10, 1809 (1969)
Two-Variable Expansion of the Scattering Amplitude: An Application of Appell's Generalized Hypergeometric Functions—John M. Charap and B. M. Minton. 10, 1823 (1969)

RELATIVISTIC KINEMATICS

Physical Regions of Six-Particle Processes—Richard P. McNeil and Richard A. Morrow. 10, 2185 (1969)

RELATIVISTIC MANY-PARTICLE THEORY

Physical-Region Discontinuity Equations for Many-Particle Scattering Amplitudes. I—Joseph Coster and Henry P. Stapp. 10, 371 (1969)
Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)
Alternative Dynamics for Classical Relativistic Particles—Amnon Katz. 10, 1929 (1969)

RELATIVISTIC QUANTUM THEORY

Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Super Hilbert Space and the Quantum-Mechanical Time Operators—David M. Rosenbaum. 10, 1127 (1969)
Wave Equations, Multipole Solutions, and Characteristic Hypersurfaces for Massless Particles—Jack P. Hajj and David L. Weaver. 10, 1185 (1969)
Hyperplane Helicity States—S. C. McDonald. 10, 1234 (1969)
Equal-Time Pseudolimits of Current Commutators and Schwinger Terms—Paul Otterson. 10, 1525 (1969)
Observables for Massive Relativistic Particles of Arbitrary Spin—J. A. de Azcárraga and L. Oliver. 10, 1869 (1969)
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

RELATIVISTIC WAVE EQUATIONS

Solutions of the Zero-Rest-Mass Equations—Roger Penrose. 10, 38 (1969)
De Sitter Symmetric Field Theory. I. One-Particle Theory—Mahmoud M. Bakri. 10, 298 (1969)
Ray Velocity and Exceptional Waves: A Covariant Formulation—Guy Boillat. 10, 452 (1969)
Solution of the Bethe-Salpeter Equation with a Square-Well Potential—R. F. Keam. 10, 594 (1969)

Massive Vector Meson Interacting with the Gravitational Field. I. General Formalism—G. E. Tauber. 10, 633 (1969)
Classical Fields on Spacelike Mass Shells—W. Rühl. 10, 791 (1969)
Analysis of Electromagnetic Radiation in the Presence of a Uniformly Moving, Uniaxially Anisotropic Medium—Ioannis M. Besieris. 10, 1156 (1969)
Wave Equations, Multipole Solutions, and Characteristic Hypersurfaces for Massless Particles—Jack P. Hajj and David L. Weaver. 10, 1185 (1969)
On Canonical $SO(4, 1)$ Transformations of the Dirac Equation—A. J. Bracken and H. A. Cohen. 10, 2024 (1969)
Irreducibility of the Ladder Representations of $U(2,2)$ when Restricted to the Poincaré Subgroup—G. Mack and I. Todorov. 10, 2078 (1969)
Wavefunctions on Homogeneous Spaces—H. Bacry and Arne Kihlberg. 10, 2132 (1969)

RELATIVITY, GENERAL

Curvature of the Petrov Canonical Forms—John A. Thorpe. 10, 1 (1969)
Killing Horizons and Orthogonally Transitive Groups in Space-Time—Brandon Carter. 10, 70 (1969)
Generalization of Green's Theorem—Joshua N. Goldberg and Ezra T. Newman. 10, 369 (1969)
Group-Theoretic Approach to the New Conserved Quantities in General Relativity—Moshe Carmeli. 10, 569 (1969)
Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
Massive Vector Meson Interacting with the Gravitational Field. I. General Formalism—G. E. Tauber. 10, 633 (1969)
First-Order Approximation to a Spherically Symmetric Solution of Einstein's Equations—R. Stabell. 10, 735 (1969)
Stationary "Noncanonical" Solutions of the Einstein Vacuum Field Equations—Richard B. Hoffman. 10, 953 (1969)
Geometrization of the Brans-Dicke Scalar Field—P. C. Peters. 10, 1029 (1969)
Quadratic Action Principle of Relativity—C. Lanczos. 10, 1057 (1969)
Exact Robertson-Walker Cosmological Solutions Containing Relativistic Fluids—J. Peter Vajk. 10, 1145 (1969)
Type D Vacuum Metrics—William Kinnersley. 10, 1195 (1969)
Covariant Electromagnetic Potentials and Fields in Friedmann Universes—P. C. Peters. 10, 1216 (1969)
Schwarzschild Singularity—Luis Bel. 10, 1501 (1969)
Initial Conditions in General Relativity: Lapse and Shift Formulation—Elliot P. Belasco and Hans C. Ohanian. 10, 1503 (1969)
Conserved Quantities in the Einstein-Maxwell Theory—Albert R. Exton, Ezra T. Newman, and Roger Penrose. 10, 1566 (1969)
Nonlinear Electrodynamics and General Relativity—R. Pellicer and R. J. Torrence. 10, 1718 (1969)
General Form of the Einstein Equations for a Blanchi Type IX Universe—Michael P. Ryan, Jr. 10, 1724 (1969)
Conserved Quantities of Newman and Penrose—David C. Robinson. 10, 1745 (1969)
Solutions of the Einstein and Einstein-Maxwell Equations—G. C. Debney, R. P. Kerr, and A. Schild. 10, 1842 (1969)

RELATIVITY, SPECIAL

Instability of Transverse Waves in a Relativistic Plasma—I. Lerche. 10, 13 (1969)
Analysis of Electromagnetic Radiation in the Presence of a Uniformly Moving, Uniaxially Anisotropic Medium—Ioannis M. Besieris. 10, 1156 (1969)
Possible Instability of the Cut-Contributions to the Ring Equations—M. Baus. 10, 1494 (1969)
Reciprocity Principle and the Lorentz Transformations—Vittorio Berzi and Vittorio Gorini. 10, 1518 (1969)
Alternative Dynamics for Classical Relativistic Particles—Amnon Katz. 10, 1929 (1969)
Relativistic Effects of Strong Binding on Slow Particles—Amnon Katz. 10, 2215 (1969)

SCATTERING

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)
High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)
Crossing and Unitarity in a Multichannel Static Model. II.—P. O. G. Ehrhardt and D. B. Fairlie. 10, 339 (1969)
Physical-Region Discontinuity Equations for Many-Particle Scattering Amplitudes. I—Joseph Coster and Henry P. Stapp. 10, 371 (1969)
Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)
Partial-Wave Analysis in Terms of $SL(2, C)/SU(2)$ Harmonic Functions—Awele Maduemezia. 10, 519 (1969)
Multiple Scattering of Electromagnetic Waves in an Underdense Plasma—Kenneth M. Watson. 10, 688 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Sufficient Conditions for Stability of the Faddeev Equations—W. W. Zachary. 10, 1098 (1969)
Diffraction of Plane Acoustic Waves and Pulses as a Singular Perturbation Problem—Edward Y. Harper. 10, 1795 (1969)
Formal Solutions of Inverse Scattering Problems—Reese T. Prosser. 10, 1819 (1969)
Relations between the Elements of the Phase Matrix for Scattering—K. D. Abhyankar and A. L. Fymat. 10, 1935 (1969)
Short-Range Interactions and Analyticity in Momentum Transfer—J. D. Finley III. 10, 2047 (1969)
Possible Characterization of Short-Range Interactions—J. D. Finley III. 10, 2060 (1969)
V-Particle Decay in the Lee Model—C. L. Hammer and T. A. Weber. 10, 2067 (1969)
Uniform Asymptotic Theory of Edge Diffraction—Robert M. Lewis and Johannes Boersma. 10, 2291 (1969)

SCATTERING, HIGH ENERGY

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)
High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)
Partial-Wave Analysis in Terms of $SL(2, C)/SU(2)$ Harmonic Functions—Awele Maduemezia. 10, 519 (1969)
Orear Behavior in Potential Scattering. II—Porter W. Johnson. 10, 946 (1969)
Codiagonal Perturbations—H. S. Green and T. Triffet. 10, 1069 (1969)
Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)

SCATTERING, INVERSE

Formal Solutions of Inverse Scattering Problems—Reese T. Prosser. 10, 1819 (1969)

SCATTERING, POTENTIAL

High-Frequency Scattering by a Transparent Sphere. I. Direct Reflection and Transmission—H. M. Nussenzveig. 10, 82 (1969)

High-Frequency Scattering by a Transparent Sphere. II. Theory of the Rainbow and the Glory—H. M. Nussenvzveig. 10, 125 (1969)

Inversion Problem with Separable Potentials—Robert L. Mills and John F. Reading. 10, 321 (1969)

High-Energy Scattering Cross Section for Singular Potentials at Large Angles—Richard M. Spector. 10, 503 (1969)

Some Analytic Properties of Scattering Amplitudes for Long-Range Forces—William R. Ross and John R. Taylor. 10, 654 (1969)

Orear Behavior in Potential Scattering. II—Porter W. Johnson. 10, 946 (1969)

Inverse Functions of the Products of Two Bessel Functions—William Sollfrey. 10, 1429 (1969)

Wiener-Hopf Method and Generalized Integral Transforms—A. Bassetto and F. Paccanoni. 10, 1809 (1969)

Effective-Range Formula for Two-Body Scattering Coupled to a Closed Secondary Channel—Mark W. Kermode. 10, 1953 (1969)

Erratum: Strong-Coupling Limit in Potential Theory. II—William M. Frank. 10, 2128 (1969)

Feynman Path Integrals and Scattering Theory—Donald-Gelman and Larry Spruch. 10, 2240 (1969)

Analytic Properties of a Class of Nonlocal Interactions. II.—D. Gutkowski and A. Scalia. 10, 2306 (1969)

SINGULARITIES IN PROPAGATORS AND SCATTERING AMPLITUDES

S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)

S-Matrix Singularity Structure in the Physical Region. II. Unitarity Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 545 (1969)

S-Matrix Singularity Structure in the Physical Region. III. General Discussion of Simple Landau Singularities—M. J. W. Bloxham, D. I. Olive and J. C. Polkinghorne. 10, 553 (1969)

Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)

Analytic Representations of Two-Point Functions with Noncanonical Light-Cone Singularities. I—Jerzy Lukierski. 10, 918 (1969)

Singularities of Conformal-Invariant Scattering Amplitudes—Darryl D. Coon. 10, 1314 (1969)

S-MATRIX THEORY

S-Matrix Singularity Structure in the Physical Region. I. Properties of Multiple Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 494 (1969)

S-Matrix Singularity Structure in the Physical Region. II. Unitarity Integrals—M. J. W. Bloxham, D. I. Olive, and J. C. Polkinghorne. 10, 545 (1969)

S-Matrix Singularity Structure in the Physical Region. III. General Discussion of Simple Landau Singularities—M. J. W. Bloxham, D. I. Olive and J. C. Polkinghorne. 10, 553 (1969)

Some Analytic Properties of Scattering Amplitudes for Long-Range Forces—William R. Ross and John R. Taylor. 10, 654 (1969)

Macroscopic Causality Conditions and Properties of Scattering Amplitudes—Colston Chandler and Henry P. Stapp. 10, 826 (1969)

S-Matrix and Classical Description of Interactions—Daniel Iagolnitzer. 10, 1241 (1969)

Conformal-Invariant Scattering Amplitude for Spinless Particles—Naren F. Bali, Darryl D. Coon, and Amnon Katz. 10, 1939 (1969)

Short-Range Interactions and Analyticity in Momentum Transfer—J. D. Finley III. 10, 2047 (1969)

Possible Characterization of Short-Range Interactions—J. D. Finley III. 10, 2060 (1969)

SOLID STATE

Method for the Evaluation of Certain Time-Dependent Thermal Averages—David W. Howgate. 10, 604 (1969)

Evaluation of "Kondo" Integrals—M. L. Glasser. 10, 1105 (1969)

Kinematic Interaction for the Heisenberg Antiferromagnet at Low Temperature—D. C. Herbert. 10, 2255 (1969)

Statistical Average of Product of Phase Sums Arising in the Study of Disordered Lattices—Priyamvada Sah. 10, 2263 (1969)

STATISTICAL MECHANICS

Canonical States in Quantum Statistical Mechanics—Robert E. Kvarda. 10, 2208 (1969)

STATISTICAL MECHANICS OF FLUIDS AND MANY-BODY PROBLEMS

Functional Integration Theory for Incompressible Fluid Turbulence. II—Gerald Rosen, J. A. Okolowski and Gene Eckstut. 10, 415 (1969)

Functional Integrals Representing Distribution Functions in Statistical Mechanics—Clas Blomberg. 10, 675 (1969)

Broken Symmetry and Generalized Bose Condensation in Restricted Geometries—M. D. Girardeau. 10, 993 (1969)

Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)

On Fluids of Particles with Short-Range Repulsion and Weak Long-Range Attractive Interaction—John B. Jalickee, Arnold J. F. Siegert, and David J. Vezzetti. 10, 1442 (1969)

Single-Particle Condensate and Pair-Correlation Theory of Inhomogeneous Boson Systems—Donald H. Kobe. 10, 1507 (1969)

Rigorous Results for Ising Ferromagnets of Arbitrary Spin—Robert B. Griffiths. 10, 1559 (1969)

On the Renormalization of the Susceptibility of a Fermi Liquid—Daniel J. Amit. 10, 1617 (1969)

One-Dimensional Bonded Fluids—G. M. Bell. 10, 1753 (1969)

Cluster Expansion in a Bose System—M. Howard Lee. 10, 1813 (1969)

Soluble Model of Condensation—M. D. Girardeau. 10, 1914 (1969)

N-Representability Theorem for Reduced Density Matrices—Hsiao S. Kiang. 10, 1920 (1969)

Self-Consistent Approximations in Many-Body Systems. II—O. Shlidor and M. Revzen. 10, 2201 (1969)

STATISTICAL MECHANICS, NONEQUILIBRIUM AND TRANSPORT THEORY

Kinetic Description of an Inhomogeneous Plasma—A. Kuszell. 10, 210 (1969)
Wave Propagation and Other Spectral Problems in Kinetic Theory—Lawrence Sirovich and James K. Thurber. 10, 239 (1969)
Theory of the Propagation of the Plane-Wave Disturbances in a Distribution of Thermal Neutrons—James J. Duderstadt. 10, 266 (1969)
Normal and Abnormal Diffusion in Ehrenfests' Wind-Tree Model—E. H. Hauge and E. G. D. Cohen. 10, 397 (1969)
Frequency Spectrum and Momentum Autocorrelation Function for a Simple Lattice—E. M. Baroody. 10, 475 (1969)
Functional Methods in Statistical Mechanics. I. Classical Theory—W. E. Brittin and W. R. Chappell. 10, 661 (1969)
Comments on Kinetic Equations for Autocorrelation Functions—P. Résibois, J. Brocas, and G. Decan. 10, 964 (1969)
Dynamics near Equilibrium of Systems Described in Thermal Hartree–Fock Approximation—B. U. Felderhof. 10 1021 (1969)
On Perturbation Expansions for Real-Time Green's Functions—Victor Korenman. 10, 1387 (1969)
Possible Instability of the Cut-Contributions to the Ring Equations—M. Baus. 10, 1494 (1969)

STATISTICAL MECHANICS OF ONE-DIMENSIONAL SYSTEMS

Translational Invariance Properties of a Finite One-Dimensional Hard-Core Fluid Using the Grand Canonical Ensemble—Kenneth Millard. 10, 7 (1969)
Many-Neighbored Ising Chain—J. F. Dobson. 10, 40 (1969)
Problem of Two Spin Deviations in a Linear Chain with Next Nearest-Neighbor Interactions—Chanchal K. Majumdar. 10, 177 (1969)
Thermodynamics of a One-Dimensional System of Bosons with Repulsive Delta-Function Interaction—C. N. Yang and C. P. Yang. 10, 1115 (1969)
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
On Next-Nearest-Neighbor Interaction in Linear Chain. II—Chanchal K. Majumdar and Dipan K. Ghosh. 10, 1399 (1969)
One-Dimensional Bonded Fluids—G. M. Bell. 10, 1753 (1969)
Ground State of a One-Dimensional *N*-Body System—F. Calogero. 10, 2197 (1969)
Vacancy Annihilation for One-Dimensional Dumbell Kinetics—R. B. McQuistan. 10, 2205 (1969)

STATISTICAL PROPERTIES OF NUCLEAR SPECTRA

Level Density of a Fermi System: Nonperiodic Perturbations of the Energy Level Scheme—Peter B. Kahn and N. Rosenzweig. 10, 707 (1969)

STATISTICAL THEORY OF ENERGY LEVELS OF COMPLEX SYSTEMS

On the Width Distribution for a Complex System Whose Hamiltonian Contains a Small Interaction That Is Odd under Time-Reversal—J. F. McDonald. 10, 1191 (1969)
On a Generalized Distribution of the Poles of the Unitary Collision Matrix—Nazakat Ullah. 10, 2099 (1969)

STATISTICAL THERMODYNAMICS, FOUNDATIONS OF

Relationships among Generalized Phase-Space Distributions—G. C. Summerfield and P. F. Zweifel. 10, 233 (1969)
Mean Ergodic Theorems in Quantum Mechanics—J. E. Moyal. 10, 506 (1969)
Nonsaturation of Gravitational Forces—Jean-Marc Lévy-Leblond. 10, 806 (1969)

STATISTICS, LATTICE

Negative Finding for the Three-Dimensional Dimer Problem—J. M. Hammersley, A. Feuerverger, A. Izenman, and K. Makani. 10, 443 (1969)
Random Walks on Lattices. III. Calculation of First-Passage Times with Application to Exciton Trapping on Photosynthetic Units—Elliott W. Montroll. 10, 753 (1969)
Solution of the Dimer Problem by the *S*-Matrix Method—Chungpeng Fan. 10, 868 (1969)
Magnetization of Ising Model in Nonzero Magnetic Field—Daniel C. Mattis and Michael Plischke. 10, 1107 (1969)
F Model on a Triangular Lattice—R. J. Baxter. 10, 1211 (1969)
Critical Behavior of Several Lattice Models with Long-Range Interaction—Mark Kac and Colin J. Thompson. 10, 1373 (1969)
One More Technique for the Dimer Problem—Jerome K. Percus. 10, 1881 (1969)

STOCHASTIC EQUATIONS

Experimental Confirmation of the Applicability of the Fokker-Planck Equation to a Nonlinear Oscillator—J. B. Morton and S. Corrsin. 10, 361 (1969)
Statistical Properties of Polycrystalline Dielectrics—John E. Molyneux. 10, 912 (1969)
New Formulation of Stochastic Theory and Quantum Mechanics—L. de la Peña-Auerbach. 10, 1620 (1969)
Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)
Bounds for Effective Bulk Modulus of Heterogeneous Materials—Melvin N. Miller. 10, 2005 (1969)
Vacancy Annihilation for One-Dimensional Dumbell Kinetics—R. B. McQuistan. 10, 2205 (1969)

SYMMETRY PHYSICS

Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)
Crossing and Unitarity in a Multichannel Static Model. II.—P. O. G. Ehrhardt and D. B. Fairlie. 10, 339 (1969)
Algebraic Theory of Ray Representations of Finite Groups—William G. Harter. 10, 739 (1969)

TENSOR ANALYSIS

Curvature Collineations: A Fundamental Symmetry Property of the Space-Times of General Relativity Defined by the Vanishing Lie Derivative of the Riemann Curvature Tensor—Gerald H. Katzin, Jack Levine, and William R. Davis. 10, 617 (1969)
Algebraic Classification of Four-Dimensional Riemann Spaces—James Thompson and Glen Schrank. 10, 766 (1969)

THREE-BODY PROBLEMS

Sufficient Conditions for Stability of the Faddeev Equations—W. W. Zachary. 10, 1098 (1969)

Potentials for Three-Body Systems—R. C. Whitten. 10, 1631 (1969)

Solution of a Three-Body Problem in One Dimension—F. Calogero. 10, 2191 (1969)

VARIATIONAL TECHNIQUES

Symmetry of the Ground Level of a Hamiltonian—W. H. Kleiner and T. A. Kaplan. 10, 236 (1969)

Complementary Bounds for Ground-State Energies—Peter D. Robinson. 10, 472 (1969)

Lower Bounds to the Ground-State Energy of Systems Containing Identical Particles—F. Calogero and C. Marchioro. 10, 562 (1969)

Expansion of the Density Matrix of an N-Fermion System in Terms of the Correlation Densities of Fermion Clusters—Tai-ichi Shibuya and Oktay Sinanoğlu. 10, 1032 (1969)

On the Growth of the Number of Bound States with Increase in Potential Strength—Barry Simon. 10, 1123 (1969)

On the Growth of the Ground-State Binding Energy with Increase in Potential Strength—Barry Simon. 10, 1415 (1969)

Bounds Associated with Integral Equations of Kirkwood-Riseman Type—N. Anderson, A. M. Arthurs, and P. D. Robinson. 10, 1498 (1969)

Particle-Hole Matrix: Its Connection with the Symmetries and Collective Features of the Ground State—Claude Garrod and Mitja Rosina. 10, 1855 (1969)

Bounds for Effective Electrical, Thermal, and Magnetic Properties of Heterogeneous Materials—Melvin N. Miller. 10, 1988 (1969)

Bounds for Effective Bulk Modulus of Heterogeneous Materials—Melvin N. Miller. 10, 2005 (1969)

Feynman Path Integrals and Scattering Theory—Donald Gelman and Larry Spruch. 10, 2240 (1969)

WAVE PROPAGATION

Wave Propagation and Other Spectral Problems in Kinetic Theory—Lawrence Sirovich and James K. Thurber. 10, 239 (1969)

Theory of the Propagation of the Plane-Wave Disturbances in a Distribution of Thermal Neutrons—James J. Duderstadt. 10, 266 (1969)

Approach to the Mode Conversion Problem in Nonuniform Acoustic Waveguides—James R. Wait. 10, 447 (1969)

Ray Velocity and Exceptional Waves: A Covariant Formulation—Guy Boillat. 10, 452 (1969)

Multiple Scattering of Electromagnetic Waves in an Underdense Plasma—Kenneth M. Watson. 10, 688 (1969)

Wave Propagation in Sinusoidally Stratified Plasma Media—K. F. Casey, J. R. Matthes, and C. Yeh. 10, 891 (1969)

Equations of the de Broglie Wavefield in the Case of Spherical Symmetry—J. Kulhanek. 10, 1152 (1969)

Analysis of Electromagnetic Radiation in the Presence of a Uniformly Moving, Uniaxially Anisotropic Medium—Ioannis M. Besieris. 10, 1156 (1969)

Perturbation Method for a Nonlinear Wave Modulation. I—Tosiya Taniuti and Nobuo Yajima. 10, 1369 (1969)

Uniform Asymptotic Theory of Edge Diffraction—Robert M. Lewis and Johannes Boersma. 10, 2291 (1969)

NOTES

NOTES

NOTES